

EPA Jacket 83529-56

PROCESSING REQUEST

Reg # 83529-S6 Decision # SZ0946

Description: CSF - new CSF Basic

Material Available Electronically (see PPLS):

☐ Electronic Label/Letter Dated

☐ Other:

Material Sent (see jacket):

☐ Stamped Label/Letter Dated

☐ Notification Dated

☒ New CSF(s) Dated

12-5-16

☐ Other:

File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.

Reviewer: Grant Rowland

Division: RD

Phone: 347-0254

Date:



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

December 5, 2016

Kt Woodall
Agent
Sharda USA LLC
c/o Wagner Regulatory Associates, Inc
P.O. Box 640
Hockessin, DE 19707

Subject: Notification per PRN 98-10 – Adding Alternate Brand Name and minor label changes
Product Name: SHARDA METOLACHLOR 86.4EC
EPA Registration Number: 83529-56
Application Date: September 6, 2016
Decision Number: 521551

Dear Ms. Woodall:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

The alternate brand name **Meto Star** has been added to the product record.

If you have any questions, you may contact Grant Rowland at 703-347-0254 or via email at rowland.grant@epa.gov.

Sincerely,

A handwritten signature in cursive script, reading "Kathryn V. Montague".

Kathryn Montague, Product Manager 23
Herbicide Branch
Registration Division (7505P)
Office of Pesticide Programs

10067/7715-2

Submission via CDX Portal

September 6th, 2016

Document Processing Desk (NOTIF)
ATTN: Kathryn Montague, PM 23
Registration Division
U.S. Environmental Protection Agency
Office of Pesticide Programs (7504P)
Room S-4900, One Potomac Yard
2777 South Crystal Drive
Arlington, Virginia 22202-4501



Dear Ms. Montague,

Subject: Sharda Metolachlor 86.4EC – EPA Registration Number 83529-56 - Notification

Wagner Regulatory Associates Inc., as agent for Sharda USA LLC, respectfully submits the enclosed notification to add the Alternate Brand Name - **Meto Star**. No other changes have been made to the label. The following documents are enclosed:

- Letter from Sharda USA LLC appointing Wagner Regulatory Associates, Inc. as its agent
- Application for Pesticide Registration (8570-1)
- Copies of Labeling (Clean& Highlighted)

If you have any questions about this submission please contact the undersigned at (302) 635-7289 or ktwoodall@wagnerreg.com.

Respectfully submitted,



Kt Woodall
Agent for Sharda USA LLC

Enclosures

DOCUMENTUM

NOTIFICATION

83529-56

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

12/05/2016

Group

15

Herbicide

Sharda Metolachlor 86.4EC**ABN: Meto Star**

Herbicide for use in cotton, peanuts, pod crops, potatoes, safflower, grain or forage sorghum, soybeans and tomatoes

ACTIVE INGREDIENT:

WT. BY %

Metolachlor: 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl) acetamide..... 86.4%

OTHER INGREDIENTS: 13.6%**TOTAL:** 100.00%

Contains 8.0 lbs. of active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN**CAUTION/PRECAUCION**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand this label, find someone to explain it to you in detail.)

FIRST AID	
IF INHALED:	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
IF IN EYES:	<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none"> Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. In case of an emergency involving this product, call CHEMTREC at 1-800-424-9300.	

Physical and Chemical Hazard: Do not mix or allow coming in contact with oxidizing agents.

[See inside booklet for complete [additional] [First Aid,] Precautionary Statements, and Directions For Use.]

EPA Reg. No. 83529-56

EPA Est. No. XXXXX-XX-XXX

Manufactured for:

Sharda USA LLC 

7217 Lancaster Pike, Suite A
Hockessin, Delaware 19707

Net Contents: _____

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if inhaled, absorbed through skin or swallowed. Causes eye irritation. Avoid breathing vapor spray mist. Avoid contact with skin, eyes or clothing. This product may cause skin sensitization reactions in some people.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below.

Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves, such as barrier laminate, butyl rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, or nitrile rubber ≥ 14 mils, polyethylene, PVC ≥ 14 mils, or Viton ≥ 14 mils
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROL STATEMENTS

Mixers and loaders supporting aerial applications are required to use closed systems. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4)). When using this closed system, the mixers and loaders PPE requirements may be reduced or modified as specified in the WPS.

When handlers used closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. DO NOT contaminate water when disposing of equipment washwaters or rinsate.

Groundwater Advisory

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Surface Water Advisory

Metolachlor can contaminate surface water through ground spray drift. Under some conditions, metolachlor may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several months post application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

Mixing/Loading Instructions

DO NOT allow **Sharda Metolachlor 86.4EC** to back-siphon into wells, spill, or improper disposal of excess pesticide, spray mixtures, or rinsates.

Check valves or anti-siphoning devices must be used on all mixing and/or irrigation equipment.

Do not mix or load **Sharda Metolachlor 86.4EC** within 50 feet of perennial or intermittent streams and rivers, natural or impounded lakes, and reservoirs. Do not mix or load **Sharda Metolachlor 86.4EC** within 50 feet of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of **Sharda Metolachlor 86.4EC** into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash-water, and rain water that may fall on the pad. Surface water shall not be allowed to either flow over

or from the pad, which means that the pad must be self-contained. The pad must be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. This labeling must be in the possession of the user at the time of pesticide application.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **24 hours**.

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves such as barrier laminate, butyl rubber ≥14 mils, or nitrile rubber ≥14 mils, or neoprene rubber ≥14 mils, polyethylene, PVC ≥14 mils, or Viton ≥14 mils
- Shoes plus socks

Failure to follow the Directions for Use, Restrictions, and Precautions in this label can result in poor weed control, crop injury, and/or illegal residues.

Not for sale, use, or distribution in Nassau or Suffolk counties in New York. Aerial application in New York state is prohibited.

Do not apply **Sharda Metolachlor 86.4EC** in windy conditions. Do not allow spray to overlap as crop injury can occur.

PRODUCT INFORMATION

Observe all precautions and limitations on the labels of each state-registered product used in tank mixtures. Tank mixtures are permitted only in states where the tank mix partner product is registered.

FOR ALL TANK MIXTURES: It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Sharda Metolachlor 86.4EC is a selective herbicide that can be used pre-plant surface-applied, pre-plant incorporated, or pre-emergence treatment in water or liquid fertilizer to control listed annual grasses and broadleaf weeds in cotton, peanuts, pod crops, potatoes, safflower, grain/forage sorghum, soybeans and tomatoes. Post-emergence applications of **Sharda Metolachlor 86.4EC** can be made on soybeans.

RESISTANCE MANAGEMENT

Sharda Metolachlor 86.4EC is a Group 15 herbicide. Weed populations may contain or develop plants that become naturally resistant to metolachlor and/or other Group 15 herbicide products. If Group 15 herbicides are used repeatedly in the same field or in successive years as the primary method of control of targeted species, weed species that have developed resistance to Group 15 herbicides can dominate the weed population, resulting in partial or total loss of weed control.

To avoid herbicide resistance:

- Do not use **Sharda Metolachlor 86.4EC** consecutively with other Group 15 herbicides that have similar modes of action on targeted weed.

- Use tank mixtures and premixes from different Groups provided that the products involved are registered for the same use, have different modes of action, and/or are effective at the tank mix or prepack rate on the weed(s) concerned.
- Utilize a comprehensive Integrated Pest Management (IPM) program.
- Monitor treated areas for loss of field efficacy.
- Contact your local state extension specialist, certified crop advisors, and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

APPLICATION INSTRUCTIONS

SOIL TEXTURES AND APPLICATION RATES

Where rates are based on soil texture, classes are categorized as follows:

Coarse-Textured	Medium-Textured	Fine-Textured
Sand, Loamy sand, Sandy loam	Loam, Silt loam, Silt	Sandy clay loam, Silty clay loam, Clay loam, Sandy clay, Silty loam, Silty clay, Clay

Coarse-Textured/Low Organic Matter Soils: Use the lower rate within the specified rate range.

Fine-Textured/High Organic Matter Soils: Use the higher rate within the specified rate range.

APPLICATION METHODS

Apply **Sharda Metolachlor 86.4EC** pre-emergence alone, or in combination with specified tank mix partners following pre-plant incorporated herbicides when used according to label instructions and such use is not prohibited on the respective labels.

Thoroughly clean sprayer/application device before applying **Sharda Metolachlor 86.4EC**. Dispose of cleaning solution in a responsible manner. Do not use a sprayer or applicator contaminated with any other materials to avoid crop damage and/or clogging of the application device.

MIXING INSTRUCTIONS

Mix **Sharda Metolachlor 86.4EC** alone with water or liquid fertilizer and apply as a spray:

- Fill the spray tank $\frac{1}{2}$ - $\frac{3}{4}$ full of water or liquid fertilizer.
- Add the specified amount of **Sharda Metolachlor 86.4EC**.
- Add the remaining water or liquid fertilizer.
- Maintain sufficient agitation during mixing and application to maintain a uniform emulsion.

TANK MIX APPLICATIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Tank Mixtures:

- Fill the spray tank $\frac{3}{4}$ full with water, and begin agitation.
- Add 2,4-D, AAtrex®, Balan®, Banvel, Basagran®, Butoxone®, Butyrac®, Canopy®, Caparol 4L®, Command®, Cotoran®, Eptam®, Gemini®, Lexone®, Lorox®, Lorox Plus, Marksman®, MSMA, Preview®, Princep®, Prowl®, Pursuit®, AAtrex + Princep, Scepter®, Sencor®, Sonalan®, Starfire®, or Treflan® ensuring products disperse.
- Add **Sharda Metolachlor 86.4EC**.
- Add Gramoxone® Extra, Landmaster® BW, or Roundup® if these products are being used.
- Add the rest of the water.

For tank mixtures with AAtrex, Banvel, Canopy, Caparol 4L, Command, Cotoran®, Eptam, Gemini, Lexone, Lorox, Lorox Plus, Marksman, Preview, Princep, Prowl®, Pursuit, AAtrex + Princep, Scepter, Sencor, Sonalan, Starfire, or Treflan, liquid fertilizers can replace all or part of the water as carrier, except for AAtrex post-emergence and Banvel post-emergence tank mixes. For tank mixtures with AAtrex, refer to the AAtrex label for additional mixing instructions. For each mixture, check compatibility with liquid fertilizers before mixing in spray tank. For all tank mixtures, agitate during mixing and application to maintain a uniform suspension.

*See **Special Mixing Instructions** for tank mixtures with Cotoran, and with AAtrex or Princep + Prowl under the appropriate tank mixture section.

Compatibility Test

Because liquid fertilizers vary, even within the same analysis, always **check compatibility with herbicide(s) prior to use**. Serious compatibility issues are most likely to occur when mixing with complete suspension or liquid fertilizers. Commercial application equipment can improve compatibility. The following test assumes a spray volume of 25 gals./A. For other spray volumes, make appropriate changes in the ingredients. To check compatibility:

1. Add 1 pint of fertilizer to each of 2 one-quart jars with tight lids.
2. To **one** of the jars, add $\frac{1}{4}$ tsp. (1.2 milliliters) of a compatibility agent approved for this use such as Compex® or Unite® ($\frac{1}{4}$ tsp. is equivalent to 2 pts./100 gals. spray). Shake/stir gently to mix.
3. To **both** jars, add the appropriate amount of herbicide(s).

If more than one herbicide is used, add them separately in the following order:

- Dry herbicides first, flowables next, and emulsifiable concentrates last.
- After each addition, shake or stir gently to thoroughly mix.
- The appropriate amount of herbicides for this test is:

Dry Herbicides: For each pound to be applied per acre, add 1.5 level teaspoons to each jar.

Liquid Herbicides: For each pint to be applied per acre, add 0.5 teaspoon or 2.5 milliliters to each jar.

Note: For **Sharda Metolachlor 86.4EC** tank mixtures with AAtrex + Princep, use $\frac{1}{4}$ - $\frac{1}{2}$ the amount of AAtrex specified and the remainder as Princep, depending on whether the 1:2 or 1:1 ratio of AAtrex to Princep is to be applied.

4. After adding all ingredients, put lids on and tighten, and invert each jar 10 times to mix.
5. Let the mixtures stand 15 minutes.
6. After 15 minutes, check jars for chemical separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if a compatibility agent is needed in the spray mixture by comparing the 2 jars. If either mixture separates but can be remixed readily, the mixture can be sprayed as long as adequate agitation is maintained.

If the mixtures are incompatible, the following methods may improve compatibility:

- Slurry the dry herbicide(s) in water before adding, or
- Add $\frac{1}{2}$ of the compatibility agent to the fertilizer, and the other $\frac{1}{2}$ to the emulsifiable concentrate or flowable herbicide before adding to the mixture.

If incompatibility is still observed, do not use the mixture.

APPLICATION TIMING

Sharda Metolachlor 86.4EC alone or in some tank mixtures with other labeled herbicides may be applied for weed control in certain crops at various times. Refer to the given crop section of the label to determine if application timings listed below are specified.

Pre-Plant Surface Applications

45 days before planting: For minimum-tillage or no-tillage systems only, apply **Sharda Metolachlor 86.4EC** alone, or with **Sharda Metolachlor 86.4EC** tank mixtures.

30-45 days before planting: Make split applications, with $\frac{3}{4}$ the specified broadcast rate for the crop and soil texture applied initially and the remaining $\frac{1}{4}$ at planting.

Less than 30 days before planting: Make split applications or a single application.

Refer to individual crop to determine if early pre-plant surface application instructions are provided. If weeds are present at the time of treatment, apply in a tank mixture combination with a contact herbicide (for example, Gramoxone Extra or Roundup). Observe directions for use, precautions, and restrictions on the label of the contact herbicide. To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

a. Pre-Plant Incorporated: Apply **Sharda Metolachlor 86.4EC** to the soil and incorporate into the top 2 inches of soil within 14 days before planting, using a finishing disk, harrow, rolling cultivator, or similar implement capable of providing uniform 2-inch incorporation. Use a pre-plant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. If crop will be planted on beds, apply and incorporate **Sharda Metolachlor 86.4EC** after bed formation, unless specified otherwise.

b. Pre-Emergence: Apply **Sharda Metolachlor 86.4EC** during planting (behind the planter) or after planting but before weeds or crops emerge.

SPECIAL APPLICATION PROCEDURES

Pre-Plant Incorporated: CA Only (Safflower, Pod Crops): Make broadcast applications of **Sharda Metolachlor 86.4EC** to the soil and thoroughly incorporate with a disk or similar implement set to till 4-6 inches deep. For more thorough incorporation, till the soil in 2 different directions (cross-till). Crops may be planted on flat surface or on beds. Exercise caution when forming the beds that only soil from the **Sharda Metolachlor 86.4EC** treated area is used. Do not bring untreated soil to the surface. If applying to pre-formed beds, incorporate **Sharda Metolachlor 86.4EC** with a tillage implement set to till 2-4 inches deep. Ensure that **Sharda Metolachlor 86.4EC** treated soil remains in the beds.

Pre-Emergence Applications (CA only): Apply **Sharda Metolachlor 86.4EC** after planting and water by sprinkler or flood irrigation within 7-10 days.

Fall Applications in the states of Iowa, Minnesota, North Dakota, South Dakota, Wisconsin, North of Route 20 in Nebraska, North of Route 136 in Illinois: Apply **Sharda Metolachlor 86.4EC** on medium- and fine-textured soils with more than 2.5% organic matter that will be planted to soybeans the following spring. The ground can be tilled before or after application. DO

NOT apply to frozen ground. DO NOT exceed 2-3-inch incorporation depth if soil is tilled after treatment. If a spring application is made, the total rate of the fall application and the spring application combined must not exceed the maximum total rate for the specific crop or illegal residues can result.

GROUND APPLICATION

Apply **Sharda Metolachlor 86.4EC** alone or in tank mixtures by ground equipment in a minimum of 10 gals. of spray mixture per acre unless otherwise specified.

Use sprayers that provide accurate and uniform application. For **Sharda Metolachlor 86.4EC** tank mixtures with wettable powder or dry flowable formulations, screens and strainers must not be finer than 50-mesh. Rinse sprayer thoroughly with clean water immediately after use.

Calculate the amount of herbicide needed for band treatment by the formula:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

Low Carrier Volumes: Broadcast Ground Application Only

Use sprayers, such as Ag-Chem RoGator®, Hagie, John Deere Hi-Cycle™, Melroe Spra-Coupe, Tyler Patriot™, or Willmar Air Ride®, that provide accurate and uniform application. **Only water may be used as a carrier.** Screens in suction and in-line strainers must be 50-mesh. Manufacturers may require that tip screens as fine as 100-mesh be used with some nozzles. Use a pump with capacity to:

- maintain up to 35-40 psi at the nozzles.
- provide sufficient agitation in tank to keep mixture in suspension.

Use a minimum of 5 gals. of spray mixture per acre. Maximum sprayer speed is 15 mph. Rinse sprayer thoroughly with clean water immediately after each use.

Note: Use low pressure nozzles to reduce drift and increase application accuracy. Exercise care when using automatic rate controlling devices to spray the material within the rated working pressure and flow ranges of the nozzles selected. Use nozzle screens used when specified by the manufacturer. Place nozzles on 20-inch centers, except flooding types which must be placed on 40-inch centers. When Flat Fan-type nozzles are used, use those with angles of 80° or 110°. Always read and follow the manufacturer's directions for optimum setup and performance of their nozzles or tips.

AERIAL APPLICATION

Apply **Sharda Metolachlor 86.4EC** with properly calibrated aerial equipment in 5 or more gallons of spray mixture per acre. Do not apply under conditions where uniform coverage cannot be obtained, or when excessive spray drift may occur. To avoid injury to sensitive crops from drift, aerial applications must adhere to the following **AERIAL USE DIRECTIONS, RESTRICTIONS AND PRECAUTIONS:**

- Nozzle height above the ground must be a maximum of 10 feet above the crop with low drift nozzles at a maximum pressure of 40 psi.
- Nozzles must be pointed toward the rear of the aircraft. The downward angle of the nozzle must not exceed 45 degrees.
- Nozzles and/or spray boom must not be located any closer to the end of the wing or rotor than ¾ the distance from the center of the aircraft.
- Use a maximum spray pressure of 40 psi.
- Establish a buffer zone between the area to be sprayed and sensitive crops.
- DO NOT spray when wind velocity is great than 5 mph.

The applicator is responsible for any loss or damage resulting from the application of **Sharda Metolachlor 86.4EC** in any manner not listed on this label. The applicator is responsible for following all state and local regulations and ordinances relative to spraying **Sharda Metolachlor 86.4EC**.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

Ground Applications: Apply using a nozzle height no more than 4 feet above the ground or crop canopy.

Aerial Applications: Product efficacy is reduced if the distance of the outermost nozzles on the boom exceed ¾ the length of the wingspan or rotor. Nozzles must point backward parallel with the air stream and must not be pointed downward more than 45 degrees.

Where states have more stringent regulations, they must be observed.

The applicator must be familiar with and account for the information provided in the **SPRAY DRIFT MANAGEMENT** section of this label.

IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets greater than 150-200 microns. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see **WIND, TEMPERATURE AND HUMIDITY**, and **TEMPERATURE INVERSION SECTIONS**).

CONTROLLING DROPLET SIZE

- **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** – Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** – Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** – Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

BOOM LENGTH

For some use patterns, reducing the effective boom length to less than $\frac{1}{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.

APPLICATION HEIGHT

Do not make applications at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

WIND

Drift potential is lowest between wind speeds of 2 – 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS

Do not apply during a temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small-suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

SENSITIVE AREAS

Sharda Metolachlor 86.4EC must only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas). Do not apply near humans or animals. Flagmen and loaders must avoid inhalation of spray mist and prolonged contact with skin.

APPLICATION WITH IMPREGNATED DRY BULK GRANULAR FERTILIZERS

Sharda Metolachlor 86.4EC may be impregnated or coated on many dry bulk granular fertilizers and applied with the fertilizers to control weeds. Follow all directions for use restrictions and precautions on the **Sharda Metolachlor 86.4EC** label regarding target crops, rates per acre, soil texture, application methods, and rotational crops.

It is the responsibility of the individual and/or company selling the herbicide/fertilizer mixture to comply with all individual state regulations relating to dry bulk granular fertilizer blending, registration, labeling, and application.

Prepare the herbicide/fertilizer mixture by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender. Space nozzles used to spray **Sharda Metolachlor 86.4EC** onto the fertilizer to provide uniform spray coverage. Aim the spray onto the fertilizer only, avoiding the walls of the blender.

If the herbicide/fertilizer mixture is too wet, add a highly absorptive material, such as Agsorb® FG or Celatom MP-79®, or similar granular clay or diatomaceous earth materials, to obtain a dry, free-flowing mixture. Add absorptive materials only after the herbicide has been thoroughly blended into the fertilizer mixture. Best application results are obtained when a granule of 6/30 particle size or of a size similar to that of the fertilizer materials is used. Use less than 2% by weight of absorptive material. Do not use more than 5% absorptive material by weight.

Calculate the amount of **Sharda Metolachlor 86.4EC** to be used per ton of fertilizer by using the following formula:

$2,000 / \text{pounds of fertilizer desired per acre} \times \text{number of pints Sharda Metolachlor 86.4EC required per acre} = \text{pints of Sharda Metolachlor 86.4EC per ton of fertilizer.}$

Application by Pneumatic (Compressed Air) Equipment: High humidity, high urea concentrations, low fertilizer use rates, and dusty fertilizer can cause fertilizer mixtures to build up and/or plug the distributor head, air tubes, or nozzle deflector plates. To minimize buildup, premix 2.0-2.5 pints/gallon **Sharda Metolachlor 86.4EC** and ExxonMobil™ Aromatic 200. Aromatic 200 is a noncombustible, nonflammable petroleum product that can be used in either a fertilizer blender or through direct injection systems. Do not use drying agents when using Aromatic 200.

If impregnating **Sharda Metolachlor 86.4EC** in a blender before application, substitute a drying agent for Aromatic 200 for a drier mixture. Add Agsorb® FG or another drying agent of 6/30 particle size. Do not use drying agents with On-The-Go impregnation equipment.

Precautions: Use mixtures of **Sharda Metolachlor 86.4EC** and Aromatic 200 on dry fertilizer only. Poor results or crop injury can occur if these mixtures are used in water or liquid fertilizer solutions for spraying applications.

Restrictions:

To avoid potential for explosion:

- DO NOT impregnate **Sharda Metolachlor 86.4EC** on ammonium nitrate, potassium nitrate, or sodium nitrate, either alone or in blends with other fertilizers.
- DO NOT combine **Sharda Metolachlor 86.4EC** with a single superphosphate (1-20-0) or treble superphosphate (0-46-0).
- DO NOT use **Sharda Metolachlor 86.4EC** on straight limestone as absorption will not occur.
- Fertilizer blends containing limestone can be impregnated.

Application of Impregnated Dry Bulk Granular Fertilizer

Apply 200 to 700 pounds of the herbicide/fertilizer mixture per acre. Apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential in order to prevent possible crop injury to subsequent rotational crops. Non-uniform application results in unsatisfactory weed control. In areas where conventional tillage is practiced, incorporate the mixture shallowly into the soil. On fine- or medium-textured soils in areas where soil incorporation is not planned, i.e., reduced-tillage situations or in some conventional till situations, apply **Sharda Metolachlor 86.4EC** approximately 30 days before planting to allow moisture to move the herbicide/fertilizer mixture into the soil. On coarse-textured soils, apply **Sharda Metolachlor 86.4EC** approximately 14 days prior to planting.

Application Precaution: Apply **Sharda Metolachlor 86.4EC** as early as possible to avoid rotational crop injury, since **Sharda Metolachlor 86.4EC** impregnated onto dry bulk fertilizers lasts longer in the soil than if it is applied as a spray in water or fluid fertilizer.

CHEMIGATION - CENTER PIVOT IRRIGATION

Sharda Metolachlor 86.4EC alone or in tank mixture with other herbicides on this label that are registered for center pivot application can be applied in irrigation water pre-emergence (after planting but before weeds or crop emerge) at specified rates listed on this label. Apply this product only through a center pivot irrigation system.

Do not apply this product through any other type of irrigation system.

Crop injury, reduced efficacy, and/or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact State Extension specialists, equipment manufacturers, or other experts. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Restriction: Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

Operating Instructions

1. The system must contain a functional check-valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from back flow.

2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump or piston pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. Prepare a mixture with a minimum of 1 part of water to 1 part herbicide(s) and inject this mixture into the center pivot system. Injecting a larger volume of a more dilute mixture per hour will usually provide more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension.
9. Meter into irrigation water during entire period of water application.
10. Apply in $\frac{1}{2}$ -1 inch of water. Use the lower water volume ($\frac{1}{2}$ inch) on coarse-textured soils and the higher volume (1 inch) on fine-textured soils. More than 1 inch of water at application may reduce weed control by moving the herbicide below the effective zone in the soil.

Precaution For Center Pivot Applications: Where sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control can occur. Where sprinkler distribution patterns overlap excessively, crop injury can occur.

Note: For information on applying in lower volumes of carrier, see **Low Carrier Application** section of this label.

CLEANING INSTRUCTIONS

- Do not use the same sprayer without thoroughly cleaning on sensitive crops; minute residues of **Sharda Metolachlor 86.4EC** in the tank can injure crops.
- Wash sprayer and spray equipment thoroughly with clean water immediately after use.
- Drain any remaining spray solution of **Sharda Metolachlor 86.4EC** from the spray tank and dispose of according to label disposal instructions.
- Rinse the spray tank and refill with water, adding 1 cup heavy-duty detergent per 20 gallons of water.
- Recycle this mixture through the equipment for 5 minutes, and spray out.
- Clean pump and nozzle screens thoroughly.
- Wash away any spray mixture from the outside of spray tank, nozzles or spray rig.
- Dispose of all rinse water in compliance with local, state, and Federal guidelines.

USE PRECAUTIONS

Where directions specify a **Sharda Metolachlor 86.4EC** tank mixture with AAtrex formulations, other brands of atrazine may be used. Follow the rates, instructions, and limitations on the AAtrex or respective atrazine product label if other brands of atrazine are used. Injury may occur following the use of **Sharda Metolachlor 86.4EC** under abnormally high soil moisture conditions during early development of the crop.

USE RESTRICTIONS

- Do not use in nurseries, turf, or landscape plantings.
- Do not apply under conditions which favor runoff or wind erosion of soil containing this product to non-target areas.
- Do not apply to impervious substrates such as paved or highly compacted surfaces.
- Do not use tail-water from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least $\frac{1}{2}$ inch of rainfall has occurred between application and the first irrigation.
- If **Sharda Metolachlor 86.4EC** is incorporated, any supplemental tillage before planting must not exceed the depth of incorporation.

Note: Certain states may have established rate limitations for atrazine within specific geographical areas. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.

Dry weather following pre-emergence application of **Sharda Metolachlor 86.4EC** or a tank mixture can reduce product efficacy.

Cultivate if weeds develop. Where reference is made to weeds partially controlled, partial control can either mean erratic control from good to poor or consistent control at a level below that generally considered acceptable for commercial weed control.

Sharda Metolachlor 86.4EC applied alone controls or partially controls the following weeds:

Barnyardgrass (watergrass)	Foxtail millet	Shattercane]
Bristly foxtail	Galinsoga	Signalgrass (<i>Brachiaria</i>)
Carpetweed	Giant foxtail	Southwestern cupgrass
Common purslane]	Goosegrass	Tall waterhemp
Common waterhemp	Green foxtail	Texas panicum]
Crabgrass	Hairy nightshade	Volunteer sorghum]
Crowfootgrass	Pigweed	Wild proso millet
Eastern black nightshade	Prairie cupgrass	Witchgrass
Eclipta]	Red rice	Woolly cupgrass
Fall panicum	Robust foxtails (purple, white)	Yellow foxtail
Florida beggarweed]	Sandbur]	Yellow nutsedge
Florida pusley	Seedling johnsongrass]	

] Partial control. Refer to the **PRODUCT INFORMATION** section. Weed control is erratic due partially to variable weather conditions.

**** Florida Beggarweed:** Apply a minimum of 2 pints/acre pre-emergence for partial control.

Texas Panicum: Apply a minimum of 2 pints/acre using a center pivot irrigation system.

To improve weed control:

1. Till moist soil thoroughly to destroy germinating and emerged weeds. If **Sharda Metolachlor 86.4EC** is applied pre-plant incorporated, tillage may be used to incorporate **Sharda Metolachlor 86.4EC** if uniform 2-inch incorporation is achieved as specified in **Application Procedures**.
2. Plant crop into moist soil immediately after tillage. If **Sharda Metolachlor 86.4EC** is to be used pre-emergence, apply at planting or immediately after planting.
3. Irrigate ½ - 1 inch of water with a sprinkler system, if available, within 2 days of application. Irrigate with ½ inch water volume on coarse-textured soils, and 1 inch on fine-textured soils. Refer to the section on **Center Pivot Irrigation Application** for instructions with this application method.
4. If irrigation is impossible and rain does not occur within 2 days after planting and application, weed control may be decreased. Under these conditions, perform a shallow cultivation as soon as weeds emerge.

Rotational Crops:

Sharda Metolachlor 86.4EC Alone:

(1) If a crop treated with **Sharda Metolachlor 86.4EC** alone is lost, any crop on this label may be replanted immediately. Do not make a second broadcast application of **Sharda Metolachlor 86.4EC**. If the original application was banded and the second crop is planted in the untreated row middles, make a second banded treatment.

Crop	Rotation Interval (months)
Alfalfa	4 months
Barley, oats, rye, wheat	4 ½ months
Clover	9 months
Tomatoes	6 months
All other crops	12 months

(2) Any crop on this label, in addition to root crops, tobacco, barley, buckwheat, milo, oats, rice, rye, wheat, cabbage, or peppers, may be planted in the spring following treatment.

(3) Following a lay-by treatment or multiple treatments applied the previous season, any crop on this label, in addition to tobacco, cabbage, or peppers, may be planted in the spring.

Restrictions:

- Do not make a second broadcast application of **Sharda Metolachlor 86.4EC**.
- Do not graze or feed forage or fodder from cotton to livestock.

Sharda Metolachlor 86.4EC Tank Mixtures: For **Rotational Crops** restrictions for **Sharda Metolachlor 86.4EC** used in tank mixtures, refer to the statements/restrictions above for **Sharda Metolachlor 86.4EC** and to the respective product labels of any mixing partner(s) for additional statements/restrictions.

CROPS

COTTON

Sharda Metolachlor 86.4EC ALONE

Application: Apply **Sharda Metolachlor 86.4EC** pre-emergence only in AR, LA, MS, TN, and Bootheel of MO.

Sandy loam: Apply 0.75-1.0 pt./A.

Medium & Fine soils: Apply 1.0-1.33 pts./A.

Apply **Sharda Metolachlor 86.4EC** pre-plant incorporated or pre-emergence in NM, OK, and TX.

Sandy loam: Apply 1.0 pt./A.

Medium soils: 1.0-1.33 pts./A.

Fine soils: 1.33 pts./A.

Apply 0.75-1.33 pts./A **Sharda Metolachlor 86.4EC** post-emergence to cotton and pre-emergence to weeds according to the state rate limitations in the **Post-Emergence** section.

Restriction: Do not use on sand and loamy sand.

Pre-Plant Incorporated (NM, OK, and TX Only):

Apply to the soil and incorporate into the top inch of soil immediately before planting, at planting, or after planting but before crop or weeds emerge. Use a rolling cultivator or similar implement to uniformly incorporate not more than 1 inch deep. Use a pre-plant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. Wet the top of the bed where furrow irrigation is used. If the crop is to be planted on beds, apply and incorporate after bed formation. Plant cotton below the zone of incorporation; i.e., at least 1 inch on fine soils and 1.5 inches on coarse and medium soils. If incorporated prior to planting, use a planter that will result in a minimum of soil disturbance.

Note: For optimal control of yellow nutsedge and suppression of seedling johnsongrass, apply **Sharda Metolachlor 86.4EC**. Pre-plant incorporated at the maximum rate within the specified rate range for the soil texture, whether applied alone or mixed with Caparol 4L.

Pre-Emergence: Apply to the soil surface at planting or after planting but before weeds or crop emerge.

Post-Emergence: Apply **Sharda Metolachlor 86.4EC** broadcast over-the-top or directed to the soil surface, according to the rate and cotton height limitations listed below by state. Application before weeds emerge or after clean cultivation to remove existing weeds is necessary since **Sharda Metolachlor 86.4EC** will not control emerged weeds. **Sharda Metolachlor 86.4EC** post-emergence may be applied over any previous registered herbicide treatment. In sprinkler-irrigated areas, sprinkler-irrigate after application with ½-1 inch of water (½ inch on coarse-textured soils to 1 inch on fine-textured soils) to incorporate **Sharda Metolachlor 86.4EC**. In furrow-irrigated areas, apply **Sharda Metolachlor 86.4EC**, incorporate with a rolling cultivator or similar implement that provides uniform shallow incorporation (2 inches or less), and then irrigate. In non-irrigated areas, if at least ½ inch of rainfall does not occur within 10 days after application, cultivate with a rolling cultivator or similar implement that provides uniform shallow incorporation of **Sharda Metolachlor 86.4EC**.

State Specific Restrictions:

VA, NC, SC, GA, FL, and AL: Apply 1.0-1.33 pts./A **Sharda Metolachlor 86.4EC** when cotton is 3-6" tall.

TN, AR, MS, MO, and LA: Apply 0.75-1.33 pts./A **Sharda Metolachlor 86.4EC** when cotton is 3-12" tall.

TX, OK, NM, AZ, CA, and Clay Soils in AR: Apply 1.0-1.33 pts./A **Sharda Metolachlor 86.4EC** when cotton is 3-12" tall but before August 1st.

Multiple Applications:

If weed pressure is heavy, difficult to control species are present and/or expected, or reinfestation occurs, and a weed control program is used, multiple applications of **Sharda Metolachlor 86.4EC** are effective when used as part of the weed control program. Apply as a pre-plant incorporated or pre-emergence treatment and follow with an application post-emergence to cotton before weeds emerge or after clean cultivation to remove existing weeds, since **Sharda Metolachlor 86.4EC** will not control emerged weeds. Cotton must be at least 3" tall at the post-emergence timing. Apply **Sharda Metolachlor 86.4EC** post-emergence over a previous pre-plant or pre-emergence **Sharda Metolachlor 86.4EC** application as shown in the following table.

State	Multiple Sharda Metolachlor 86.4EC Applications to Cotton		
	Pre-Plant Incorporated or Pre-Emergence Pts./A	+	Post-Emergence and Height Pts./A
MS, LA, TN, AR, MO	0.75 – 1.33 (Pre-Emergence only)		0.75 – 1.33 to 3-12" Cotton
TX, OK, NM	1.0 – 1.33		1.0 – 1.33 to 3-12" Cotton before Aug. 1 st
NC & VA	1.0 – 1.33 (Pre-Emergence only)		1.0 – 1.33 to 3-12" Cotton

In sprinkler-irrigated areas, sprinkler irrigate after application with ½ -1" of water (½" on coarse textured soils to 1" on fine-textured soils) to incorporate **Sharda Metolachlor 86.4EC**. In furrow-irrigated areas, apply **Sharda Metolachlor 86.4EC**, incorporate with a rolling cultivator or similar implement that provides uniform shallow incorporation (2" or less), and then irrigate. In non-irrigated areas, if at least ½" rainfall does not occur within 10 days after application, cultivate with a rolling cultivator or similar implement that provides uniform shallow incorporation of **Sharda Metolachlor 86.4EC**.

Note: For best control of yellow nutsedge and suppression of seedling johnsongrass, apply **Sharda Metolachlor 86.4EC** pre-plant incorporated, pre-emergence, or post-emergence to cotton and pre-emergence to weeds at the maximum rate within the specified rate range for the soil texture, whether applied alone or in combinations. Do not apply more than a total of 2.0 pts./A on coarse soils

or 4 pts./A of **Sharda Metolachlor 86.4EC** on medium and fine soils during a growing season. These treatments may be applied over previous registered herbicide treatments.

Restrictions:

- Do not apply **Sharda Metolachlor 86.4EC** on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed.
- Do not make broadcast applications of **Sharda Metolachlor 86.4EC** to cotton planted in furrows more than 2 inches deep. Make band applications to cotton planted in furrows deeper than 2 inches, but band width must not exceed the width of the bottom of the furrow.
- Do not apply **Sharda Metolachlor 86.4EC** post-emergence until after first "knifing" or cultivation to level soil surface.
- Do not apply over-the-top in fluid fertilizer or any other adjuvant, surfactant, oil, or other pesticide not listed in the cotton section of this label.
- Do not graze or feed forage or fodder from cotton to livestock.
- Do not apply on Taloka silt loam.
- Do not use in Gaines County, TX.

Sharda Metolachlor 86.4EC COMBINATIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Tank Mixture with Caparol 4L

Apply **Sharda Metolachlor 86.4EC** tank mixtures with Caparol 4L pre-plant incorporated or pre-emergence in water or fluid fertilizer. When fluid fertilizer is used as a carrier for **Sharda Metolachlor 86.4EC**, either alone or in combination with Caparol 4L, mix only the amount that will be sprayed in one operation. Do not allow mixtures to stand without agitation. Only water may be used as a carrier for post-emergence directed application.

In addition to those weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC + Caparol 4L**, applied pre-plant incorporated or pre-emergence, controls the following weeds:

Annual morningglory	Junglerice	Mustard	Ragweed
Groundcherry	Lambsquarters	Prickly sida (teaweed)	Shallow-germinating seeds
Hairy night shade	Malva	Purslane	of cocklebur & coffeeweed
			Wild oats

As a post-emergence directed application, Caparol provides post-emergence control and residual control of weeds on its label, while **Sharda Metolachlor 86.4EC** provides residual control of weed species on its label. **Sharda Metolachlor 86.4EC** will not control emerged weeds.

Pre-Plant Incorporated or Pre-Emergence:

Apply **Sharda Metolachlor 86.4EC + Caparol 4L**, either pre-plant incorporated or pre-emergence, using the appropriate rate from the **Sharda Metolachlor 86.4EC + Caparol 4L – Cotton (NM, OK, TX)** table. Plant cotton below the zone of incorporation; i.e., at least 1" on fine soils and 1½" on coarse and medium soils. If incorporated before planting, use a planter that will result in a minimum soil disturbance.

Sharda Metolachlor 86.4EC + Caparol 4L – Cotton (NM, OK, TX)

Do not use on sand, loamy sand soils.

USE AREAS	SOIL TEXTURE	BROADCAST RATES PER ACRE	
		Sharda Metolachlor 86.4EC	Caparol 4L
OK, and Blacklands and Gulf Coast of TX	Loams	0.85 - 1.33 pts.	2.4 pts.
	Clays	1.33 pts.	4.8 pts.
Rio Grande Valley of TX	Loams	0.85 - 1.33 pts.	3.2 pts.
	Clays	1.33 pts.	4.8 pts.
NM; High Plains, Rolling Plains, Edwards Plateau of TX; and Southwest TX	Sandy loam	0.85 - 1.0 pt.	1.6 pts.
	Loams	0.85 - 1.33 pts.	2.4 pts.
	Sandy clay loam	1.33 pts.	2.4 pts.
	Other clay soils	1.33 pts.	3.2 pts.

Post-Emergence-Directed (AR, AZ, CA, LA, MS, NM, OK, TN, TX, and MO): Tank mix **Sharda Metolachlor 86.4EC** with Caparol 4L in water and apply post-emergence in cotton to control emerged weeds listed on the Caparol 4L label and residual pre-emergence control of weeds controlled by **Sharda Metolachlor 86.4EC** and Caparol 4L or apply after cultivation for residual pre-emergence control. These treatments may be applied over previous registered treatments, including **Sharda Metolachlor 86.4EC**; however, the maximum label rate of any product must not be exceeded. **Do not apply over-the-top of cotton.**

Apply **Sharda Metolachlor 86.4EC + Caparol 4L** in a minimum of 20 gals. of spray volume per acre. Follow the directions, limitations, restrictions and precautions on the Caparol 4L label when Caparol is applied as a post-emergence directed application. Refer to the directions, limitations, and precautions for use of **Sharda Metolachlor 86.4EC** under the **Cotton-Sharda Metolachlor 86.4EC Alone-Post-Emergence** section.

Restrictions:

- Do not make broadcast applications of **Sharda Metolachlor 86.4EC** + Caparol 4L to cotton planted in furrows deeper than 2". Make band applications to cotton planted in furrows deeper than 2", but band width must not exceed the width of the bottom of the furrow.
- Do not apply on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed.
- Do not graze or feed forage or fodder from cotton to livestock.
- Do not apply to glandless cotton varieties.
- Do not apply on Taloka silt loam.
- Do not use in Gaines County, TX.
- Do not apply in cut areas of newly leveled fields, or in areas of excess salt.
- Refer to the Caparol 4L label for further instructions and limitations.

Tank Mixture with Cotoran DF

Tank mix **Sharda Metolachlor 86.4EC** + Cotoran DF pre-emergence to control weeds controlled by **Sharda Metolachlor 86.4EC** alone, and those as listed on the Cotoran DF label. This combination controls spotted spurge, hyssop spurge, nodding spurge, and prostrate spurge. Apply to the soil surface at planting or after planting but before weeds or crop emerge, using the appropriate rates from the **Sharda Metolachlor 86.4EC + Cotoran DF-Cotton** table. Apply the tank mixture post-emergence to cotton but pre-emergence to weeds, or apply post-emergence to both cotton and broadleaf weeds for control of weeds on the Cotoran label. Apply as a directed, semi-directed, or over-the-top spray. **Sharda Metolachlor 86.4EC** will not control emerged weeds but will provide pre-emergence control of species on its label.

Mixing Instructions: Incompatibility can occur when tank mixing **Sharda Metolachlor 86.4EC** with Cotoran DF. To avoid incompatibility:

- Fill the spray tank $\frac{3}{4}$ full with water or fluid fertilizer and start agitation.
- Add Cotoran DF and allow it to become dispersed.
- Add X-77 at 0.5% volume/volume final spray (4 pts./100 gals.).
- Add **Sharda Metolachlor 86.4EC**.
- Add the rest of the water or fluid fertilizer.
- Agitate during mixing and application to maintain a uniform suspension.

Restriction:

- Do not use fluid fertilizer as a carrier for post-emergence applications.

Sharda Metolachlor 86.4EC + Cotoran DF-Cotton

Do not use on sand, loamy sand soils.

USE AREAS	SOIL TEXTURE	BROADCAST RATES PER ACRE	
		SHARDA METOLACHLOR 86.4EC	COTORAN DF*
AR, LA, MS, Bootheel of MO & TN	Sandy loam	0.75 - 1.0 pts.	1.2 lbs.
	Loam, silt, silt loam	1.0 - 1.33 pts.	1.2 - 1.9 lbs.
	Fine	1.0 - 1.33 pts.	1.9 - 2.4 lbs.
Eastern OK, Gulf Coast, Rio Grand Valley & Eastern TX	Sandy loam	0.85 - 1.0 pts.	1.2 lbs.
	Loam, silt, silt loam	1.0 - 1.33 pts.	1.2 - 1.9 lbs.
	Fine	1.33 pts.	1.9 - 2.4 lbs.

*When using Cotoran 4L, use equivalent rates. Multiply lbs. of Cotoran DF by 1.7 to get pts. of Cotoran 4L.

Post-Emergence: Apply this tank mixture post-emergence to cotton but pre-emergence to weeds or post-emergence to both cotton and weeds for control of weeds on the Cotoran label. Apply as a directed, semi-directed, or over-the-top spray. **Sharda Metolachlor 86.4EC** will not control emerged weeds but will provide pre-emergence control of species on its label. Apply when cotton is in the 3-12" stage. Where rate ranges are given for Cotoran DF, use the higher rate within the specified rate range when applying post-emergence to weeds that are 2" or less. These treatments may be applied over previous registered treatments, including **Sharda Metolachlor 86.4EC**, provided the maximum label rate of any product is not exceeded.

Restrictions:

- Do not apply **Sharda Metolachlor 86.4EC** + Cotoran on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed.
- Do not make broadcast applications of **Sharda Metolachlor 86.4EC** + Cotoran to cotton planted in furrows more than 2" deep. Band applications may be made to cotton planted in furrows deeper than 2 inches, but band width must not exceed the width of the bottom of the furrow.
- Do not use on Taloka silt loam.
- Do not feed treated forage or gin trash to livestock or graze treated areas.
- Do not use in Gaines County, TX.

Refer to the Cotoran labels for further instructions, restrictions, precautions, and limitations.

Tank Mixture of Sharda Metolachlor 86.4EC or Sharda Metolachlor 86.4EC + Cotoran with Gramoxone Extra or Roundup for Minimum-Tillage or No-Tillage Systems

In minimum-tillage or no-tillage systems where cotton is planted directly into a cover crop, stale seedbed, or previous crop residues, the contact herbicides Gramoxone Extra or Roundup may be added to a tank mix of either **Sharda Metolachlor 86.4EC** or **Sharda Metolachlor 86.4EC + Cotoran**. When used as directed, the Gramoxone Extra portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds. Roundup combinations will control emerged annual and perennial weeds when applied as directed on the Roundup label. The **Sharda Metolachlor 86.4EC** and **Sharda Metolachlor 86.4EC + Cotoran** portion of the tank mixture provides pre-emergence control of the weeds listed on this label in the **Sharda Metolachlor 86.4EC** and **Sharda Metolachlor 86.4EC + Cotoran** sections, respectively.

Refer to the label of each product used in combination and observe the planting details, information regarding application, geographical restrictions, and all other precautions and limitations. Refer to **Mixing Instructions** under the **Tank Mixture with Cotoran DF** section.

Application Instructions:

Apply before, during, or after planting, but before the cotton emerges. Apply 0.85-1.0 pts./A **Sharda Metolachlor 86.4EC** on sandy loams, medium-, and fine-textured soils. Refer to the **Sharda Metolachlor 86.4EC + Cotoran DF-Cotton** table for the Cotoran DF rates.

Add Gramoxone Extra or Roundup at the following broadcast rates:

Gramoxone Extra: 1.5-2.0, 2.0-2.5, or 2.5-3.0 pts./A to 1-3", 3-6", or 6" tall weeds, respectively.

Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50-74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6".

Restriction:

- Do not apply combinations containing Gramoxone Extra in suspension-type liquid fertilizers as the activity of paraquat will be reduced.

Roundup: See the Roundup label for weeds controlled, rates, and other use directions.

Heavy rains soon after application can result in crop injury, especially in poorly drained areas, where water stands for several days, or where the seeding slit has not been properly closed.

Restrictions:

- Do not apply **Sharda Metolachlor 86.4EC + Cotoran 4L + Roundup** in tank mixture because of compatibility problems.
- Do not use in Gaines County, TX.

Refer to the Cotoran labels and the **Tank Mixture with Cotoran DF** section of this label for further instructions, restrictions precautions, and limitations.

Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.

Tank Mixture with MSMA, MSMA + Caparol, or MSMA + Cotoran

Tank mix **Sharda Metolachlor 86.4EC** with MSMA in water and apply post-emergence control of emerged weeds listed on the MSMA product label and residual pre-emergence control of weeds controlled by **Sharda Metolachlor 86.4EC**. The addition of Caparol or Cotoran will add control of weed species on their respective labels.

Post-Emergence-Directed (AR, AZ, CA, LA, MS, NM, OK, TN, TX, and Bootheel of MO): Apply **Sharda Metolachlor 86.4EC + MSMA** post-emergence-directed to 3-12" cotton according to the directions, limitations, restrictions and precautions on the MSMA product label, as well as the directions, limitations, and precautions for use of **Sharda Metolachlor 86.4EC** in the section for **Cotton-Sharda Metolachlor 86.4EC Alone-Post-emergence**. These treatments can be applied over previous registered treatments, including **Sharda Metolachlor 86.4EC**; however, the maximum label rate of any product must not be exceeded. Cotoran or Caparol may be added to the **Sharda Metolachlor 86.4EC + MSMA** tank mixture according to the respective label directions for application to 3-12" cotton. When these mixtures are used, follow the mixing instructions for **Sharda Metolachlor 86.4EC + Caparol** or **Cotoran** and then add the MSMA product.

Restrictions:

- Do not use **Sharda Metolachlor 86.4EC** in tank mix with premixes of MSMA plus herbicides other than those registered for use in tank mixture with **Sharda Metolachlor 86.4EC** on cotton.
- Do not apply after first cotton bloom.

PEANUTS

Sharda Metolachlor 86.4EC ALONE

Apply **Sharda Metolachlor 86.4EC** pre-plant incorporated, post-plant incorporated, pre-emergence, or lay-by using the rates specified below.

Pre-Plant Incorporated or Pre-Emergence: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Post-Plant Incorporated: Apply and shallowly incorporate **Sharda Metolachlor 86.4EC** into the soil after planting but before peanut germination. Keep incorporation depth and incorporating implements above the seed or seed will be damaged.

Lay-by: Apply **Sharda Metolachlor 86.4EC** to the soil immediately after the last normal cultivation.

Apply **Sharda Metolachlor 86.4EC** alone, pre-plant incorporated, post-plant incorporated, pre-emergence, or lay-by at a broadcast rate of 1.0-1.33 pts./A in the Southeast and 0.85-1.33 pts./A in NM, OK, and TX.

Florida beggarweed in the Southeast (Partial control): Apply 1.33-2.0 pts./A pre-emergence.

Note: **Sharda Metolachlor 86.4EC** alone can be applied as directed after any of the following preplant incorporated herbicides when used according to label instructions:

Balan: 3-4 qts./A	Treflan EC: 1 pt./A	Vernam®: 2.33-3 pts./A
Sonalan: 1.25-3 pts./A	Pursuit: 0.25 pt./A	Prowl: 1-2 pts./A

Restrictions:

- Do not graze or feed peanut forage or fodder to livestock for 30 days following application.
- Do not apply within 90 days of harvest.

Sharda Metolachlor 86.4EC COMBINATIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Tank Mixture with Balan L.C.

Sharda Metolachlor 86.4EC + Balan tank mixture applied pre-plant incorporated controls those weeds listed under **Sharda Metolachlor 86.4EC Applied Alone** and those weeds as listed on the Balan label.

Apply 1.0-1.33 pts./A of **Sharda Metolachlor 86.4EC** + 3-4 qts./A of Balan in a minimum of 10 gals. of spray volume per acre for ground application or in a minimum of 5.0 gals. of spray volume per acre for aerial application. Follow the procedures for Balan on the Balan label for soil preparation and incorporation of this tank mix. Apply and incorporate **Sharda Metolachlor 86.4EC** + Balan up to 14 days prior to planting.

Note: Follow all restrictions and precautions on the Balan label.

Multiple Applications

Where weed pressure is heavy or where species difficult to control are expected, **Sharda Metolachlor 86.4EC** is most effective when used as follows:

Southeast Only (AL, FL, GA, NC, SC, VA)

1st Application: Apply **Sharda Metolachlor 86.4EC** pre-plant incorporated as directed under **Peanuts-Sharda Metolachlor 86.4EC Alone** or apply **Sharda Metolachlor 86.4EC** + Balan pre-plant incorporated as directed previously in this section. Refer to the respective section for weeds controlled.

2nd Application: Apply 1.0-2.0 pts./A **Sharda Metolachlor 86.4EC** any time from pre-emergence up to "ground cracking" for extended control of weeds not yet emerged. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for a list of weeds controlled.

3rd Application: Apply **Sharda Metolachlor 86.4EC** at lay-by as directed under **Peanuts-Sharda Metolachlor 86.4EC Alone**. Use only when late germinating weeds are expected to be a problem. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for a list of weeds controlled.

Restrictions:

- Do not graze or feed peanut forage or fodder to livestock for 30 days following application.
- Do not apply within 90 days of harvest.
- Do not apply more than the equivalent of 2.66 pts. of **Sharda Metolachlor 86.4EC** per acre during any one year.

Southwest Only (NM, OK, TX)

1st Application: Apply **Sharda Metolachlor 86.4EC** pre-plant incorporated or pre-emergence or at-cracking as directed previously in this section. Refer to the respective section for weeds controlled.

2nd Application: Apply **Sharda Metolachlor 86.4EC** at lay-by as directed under **Peanuts-Sharda Metolachlor 86.4EC Alone** on this label. Use only when late germinating weeds are expected to be a problem. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for a list of weeds controlled.

Restrictions:

- Do not graze or feed peanut forage or fodder to livestock for 30 days following application.
- Do not apply within 90 days of harvest.
- Do not apply more than the equivalent of 2.67 pts. of **Sharda Metolachlor 86.4EC** per acre during any one year.
- Do not use **Sharda Metolachlor 86.4EC** after peanuts have emerged.

Tank Mixture or Sequentially with Pursuit

The tank mixture or sequential treatment of **Sharda Metolachlor 86.4EC** and Pursuit controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Pursuit alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Pursuit label for weeds controlled by Pursuit. Refer to the respective labels for application methods, timing, rates, restrictions, and precautions; and use in accordance with the more restrictive label. **Sharda Metolachlor 86.4EC** will not control emerged weeds.

Restriction:

- Do not exceed the maximum specified label rate of either product.

Tank Mixture with Sonalan

The tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Sonalan alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Sonalan label for weeds controlled by Sonalan. Apply **Sharda Metolachlor 86.4EC** + Sonalan pre-plant incorporated, using the appropriate rate from the **Sharda Metolachlor 86.4EC + Sonalan-Peanuts** **Sharda Metolachlor 86.4EC + Sonalan-Peanuts** table. Follow soil preparation procedures for Sonalan. Refer to the Peanut Sonalan/**Sharda Metolachlor 86.4EC** Tank Mixture label for incorporation specifications.

Sharda Metolachlor 86.4EC + Sonalan-Peanuts

USE AREAS	SOIL TEXTURE	BROADCAST RATES PER ACRE	
		SHARDA METOLACHLOR 86.4EC	SONALAN
Southeast	Coarse	1.0 - 1.33 pts.	1.25 - 2.0 pts.
	Medium		1.75 - 2.50 pts.
	Fine		2.25 - 3.0 pts.
NM, OK, TX	Coarse	0.85 - 1.33 pts.	1.25 - 2.0 pts.
	Medium		1.75 - 2.50 pts.
	Fine		2.25 - 3.0 pts.
Follow all use directions, limitations, restrictions, precautions, and instructions regarding application to peanuts on the Sharda Metolachlor 86.4EC and Sonalan labels.			

Tank Mixture with Prowl

Sharda Metolachlor 86.4EC + Prowl applied pre-plant incorporated controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone plus Texas panicum, field sandbur, johnsongrass from seed, lambsquarters, kochia, annual spurge, and other species on the Prowl label. Apply **Sharda Metolachlor 86.4EC** + Prowl by ground or by aerial equipment within 14 days before planting. Incorporate into the top 1-2" of soil before planting and within 7 days of application, using a finishing disk or similar implement capable of providing uniform incorporation. If peanuts will be planted on beds, apply and incorporate after bed formation. Refer to the **Incorporation** instructions of the respective labels for additional directions.

Apply **Sharda Metolachlor 86.4EC** + Prowl pre-plant incorporated using the appropriate rates from the **Sharda Metolachlor 86.4EC** + **Prowl-Peanuts** table.

Sharda Metolachlor 86.4EC + Prowl-Peanuts

USE AREAS	SOIL TEXTURE	BROADCAST RATES PER ACRE
		SHARDA METOLACHLOR 86.4EC + PROWL
NM, OK, TX	Sandy, loamy sand	0.85 + 1.0 - 1.5 pts.
	Sandy loam	0.85 - 1.0 + 1.0 - 1.5 pts.
	Fine	1.33 + 1.0 - 1.5 pts.
Other Peanut-Growing States	Sandy, loamy sand	1.0 - 1.33 + 1.5 - 2.0 pts.
	Sandy loam	1.0 - 1.33 + 1.5 - 2.0 pts.
	Fine	1.33 + 1.5 - 2.0 pts.
Follow all use directions, limitations, restrictions, precautions, and instructions regarding application to peanuts on the Sharda Metolachlor 86.4EC and Prowl labels.		

Tank Mixture or Sequentially with Starfire

Sharda Metolachlor 86.4EC + Starfire applied at ground cracking or sequentially will control or suppress small (1-6") emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **Sharda Metolachlor 86.4EC Applied Alone** section of this label. Apply 11 fl. oz./A of Starfire with the appropriate **Sharda Metolachlor 86.4EC** rate from the **Peanuts-Sharda Metolachlor 86.4EC Alone** section in a minimum spray volume of 20 gals./A with ground equipment. A second application of **Sharda Metolachlor 86.4EC** + Starfire may be made 28 days after ground cracking. (Refer to the **Peanuts-Sharda Metolachlor 86.4EC Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are indicated.) A second Starfire

application may be made in all peanut growing areas if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

Tank Mixture or Sequentially with Starfire + Basagran

Adding Basagran to the **Sharda Metolachlor 86.4EC** + Starfire mixture improves control of prickly sida, cocklebur, smartweed, and bristly starbur. **Sharda Metolachlor 86.4EC** + Starfire + Basagran applied at ground cracking or sequentially will control or suppress small (1-6") emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **Sharda Metolachlor 86.4EC Applied Alone** section of this label. Apply 1 pt./A of Basagran + 11 fl. oz./A of Starfire with the appropriate **Sharda Metolachlor 86.4EC** rate from the **Peanuts-Sharda Metolachlor 86.4EC Alone** section in a minimum spray volume of 20 gals./A with ground equipment. A second application of **Sharda Metolachlor 86.4EC** + Starfire + Basagran may be made 28 days after ground cracking. (Refer to the **Peanuts-Sharda Metolachlor 86.4EC Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are indicated.) A second Starfire + Basagran application may be made in all peanut growing areas, if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

Tank Mixture or Sequentially with Starfire + Butyrac 200 or Butoxone 200

Adding Butyrac 200 or Butoxone 200 to the **Sharda Metolachlor 86.4EC** + Starfire mixture improves control of sicklepod, morningglory, and cocklebur. **Sharda Metolachlor 86.4EC** + Starfire + Butyrac 200 or Butoxone 200 applied at ground cracking or sequentially will control or suppress small (1-6") emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **Sharda Metolachlor 86.4EC Applied Alone** section of this label. Apply 11 fl. oz./A of Starfire + 8-16 fl. oz./A (0.125-0.25 lb./A) of Butyrac 200 or Butoxone 200 with the appropriate **Sharda Metolachlor 86.4EC** rate from the **Peanuts-Sharda Metolachlor 86.4EC Alone** section in a minimum spray volume of 20 gals./A with ground equipment. A second application of **Sharda Metolachlor 86.4EC** + Starfire + Butyrac 200 or Butoxone 200 may be made 28 days after ground cracking. (Refer to the **Peanuts-Sharda Metolachlor 86.4EC Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are indicated.) A second Starfire + Butyrac 200 or Butoxone 200 application may be made in all peanut growing areas if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

Tank Mixture or Sequentially with Basagran

Sharda Metolachlor 86.4EC + Basagran applied at ground cracking or sequentially will control species on the Basagran label and provide residual control of species listed in the **Sharda Metolachlor 86.4EC Applied Alone** section of this label. Apply 1-2 pts./A of Basagran in 20 gals./A, depending on weed species and stage of growth as specified on the Basagran label, with the appropriate **Sharda Metolachlor 86.4EC** rate from the **Peanuts-Sharda Metolachlor 86.4EC Alone** section. A second application of the combination may be made before peanut pegging. (Refer to the **Peanuts-Sharda Metolachlor 86.4EC Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are indicated.) A second Basagran application may be made in all peanut growing areas if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

Tank Mixture or Sequentially with Basagran + Butyrac 200 or Butoxone 200

Sharda Metolachlor 86.4EC + Basagran + Butyrac 200 or Butoxone 200 applied at ground cracking or sequentially will control species on the Basagran label and on the Butyrac or Butoxone labels, especially morningglories. Apply 1.5-2 pts./A of Basagran + 8 fl. oz./A of Butyrac 200 or Butoxone 200 in 20 gals./A, depending on weed species and stage of growth as specified on the Basagran label, with the appropriate **Sharda Metolachlor 86.4EC** rate from the **Peanuts-Sharda Metolachlor 86.4EC Alone** section. A second application of the combination may be made before peanut pegging. (Refer to the **Peanuts-Sharda Metolachlor 86.4EC Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are indicated.) A second Basagran + Butyrac 200 or Butoxone 200 application may be made in all peanut growing areas, if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

Tank Mixture or Sequentially with Storm®

Sharda Metolachlor 86.4EC + Storm applied at ground cracking through 2 expanded tetra foliate leaves or **Sharda Metolachlor 86.4EC** applied according to the directions for **Sharda Metolachlor 86.4EC Alone** and followed with an at-cracking through post-emergence treatment of Storm as specified on its label will control species on the Storm label and provide residual control of species listed in the **Sharda Metolachlor 86.4EC Applied Alone** section of this label. **Sharda Metolachlor 86.4EC** will not control emerged weeds. Refer to the **Peanuts-Sharda Metolachlor 86.4EC Alone** section and to the Storm label and follow all directions, limitations, and restrictions for each product.

POD CROPS

Pod crops, including garbanzo, great northern beans, kidney beans, lima beans, mung beans, navy beans, peas (English*; southern peas, such as blackeye, pinkeye, crowder, etc.), pinto beans, snap beans (green, wax, string), lentils, and lupines (sweet, white, white sweet, and grain).

Sharda Metolachlor 86.4EC ALONE

Apply **Sharda Metolachlor 86.4EC**, either pre-plant incorporated or pre-emergence, using the appropriate rate specified below.

Pre-Plant Incorporated or Pre-Emergence: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Coarse soils (<3% organic matter): Apply 1.0-1.33 pts./A.

Coarse soils (>3% organic matter): Apply 1.33 pts./A.

Medium soils: Apply 1.33-1.67 pts./A.

Fine soils (<3% organic matter): Apply 1.33-1.67 pts./A.

Fine soils (>3% organic matter): Apply 1.67-2 pts./A.

Restrictions:

- Do not use on English peas in northeastern U.S.; other areas only make pre-emergence applications.
- Do not cut for hay within 120 days following an **Sharda Metolachlor 86.4EC** application.
- Do not apply more than 3.0 pts./A of **Sharda Metolachlor 86.4EC** during any one crop year.

Sharda Metolachlor 86.4EC COMBINATIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Restriction:

- When applying **Sharda Metolachlor 86.4EC** in combination on pod crops, do not cut for hay within 120 days following application.

Tank Mixture and Sequential Applications with Eptam-Beans (Green or Dry)

This mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Eptam alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section of this label for weeds controlled by **Sharda Metolachlor 86.4EC** alone and to the Eptam label for weeds controlled by Eptam.

Pre-Plant Incorporated: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Sequential: Apply Eptam alone pre-plant incorporated as specified on that label. Follow with a pre-emergence application of **Sharda Metolachlor 86.4EC** at rates specified for **Sharda Metolachlor 86.4EC** alone, during planting (behind the planter), or after planting but before the weeds or crop emerge.

Refer to the **PRODUCT INFORMATION** section of this label and to the Eptam label for weather, cultural practices, and all other restrictions, precautions and limitations that affect performance of these products.

Apply 2.5-4.5 pts./A of Eptam 7E with **Sharda Metolachlor 86.4EC** as specified. Refer to the Eptam label for rate limitations depending on geographical area and for species and varietal restrictions.

Coarse soils (<3% organic matter): Apply 0.85 pts./A.

Coarse soils (>3% organic matter): Apply 1.0 pts./A.

Medium soils (<3% organic matter): Apply 1.0 pts./A.

Medium soils (>3% organic matter): Apply 1.33 pts./A.

Fine soils (<3% organic matter): Apply 1.33 pts./A.

Fine soils (>3% organic matter): Apply 1.33-1.67 pts./A.

Restriction:

- Do not exceed 3.5 pts./A of Eptam 7E on small white beans or green beans grown on coarse textured soils.

Tank Mixture with Treflan-Beans (Dry-Kidney, Navy, Pinto, etc.; Lima; and Snap)

Sharda Metolachlor 86.4EC + Treflan tank mix applied pre-plant incorporated controls those weeds listed under **Sharda Metolachlor 86.4EC Applied Alone** and those weeds listed for Treflan alone on the Treflan label. **Sharda Metolachlor 86.4EC + Treflan** may be applied by ground or by aerial equipment and incorporated up to 14 days prior to planting. Follow the instructions on this label and on the respective Treflan label using equipment that provides uniform 2" incorporation.

Apply **Sharda Metolachlor 86.4EC + Treflan** tank mix using the appropriate **Sharda Metolachlor 86.4EC** rate specified for **Sharda Metolachlor 86.4EC** alone, and the Treflan rate from the Dry Beans, and the Lima and Snap Beans sections of the respective Treflan label. Choose the product rate for the specific soil texture/organic matter classification and weed species expected.

Note: Follow all restrictions and precautions on the respective Treflan label and in the **Pod Crops-Sharda Metolachlor 86.4EC Alone** section of this label.

POTATOES

Sharda Metolachlor 86.4EC ALONE

Apply **Sharda Metolachlor 86.4EC**, either incorporated, pre-emergence, or after hilling/lay-by, according to directions specified below for control of weeds listed under the **PRODUCT INFORMATION** section. Within a rate range, use the lower rate within the specified rate range on soils relatively coarse-textured or low in organic matter; use the higher rate within the specified rate range on soils relatively fine-textured or high in organic matter. Effectiveness will be reduced if later cultural practices expose untreated soil.

Incorporated: Apply **Sharda Metolachlor 86.4EC** at 1.0-2.0 pts./A to the soil and incorporate into the top 3" before planting using a finishing disk, harrow, rolling cultivator, or similar implement. Planting and later cultural practices must not bring untreated soil to the surface. Post-plant incorporated application may be made any time after planting to drag-off but before potato emergence. Use an

implement that evenly distributes **Sharda Metolachlor 86.4EC** in the top 2" of soil. Do not damage potato seed pieces or sprouts with incorporation equipment.

Pre-Emergence: Apply **Sharda Metolachlor 86.4EC** at 1.0-2.0 pts./A, either after planting as a pre-emergence, delayed Pre-emergence, after drag-off or hilling treatment, but before weeds emerge. Up to 2.75 pts./A of **Sharda Metolachlor 86.4EC** alone may be used where soil organic matter is between 6% and 20%.

After Hilling/Lay-by: Apply 1.67 pts./A of **Sharda Metolachlor 86.4EC** after hilling/at lay-by to control **Sharda Metolachlor 86.4EC** sensitive species for remainder of the growing season. This application will not control emerged weeds. It may be applied over a previous **Sharda Metolachlor 86.4EC** application but do not apply more than 3.7 pts./A of **Sharda Metolachlor 86.4EC** in a single crop season.

Restrictions:

- Do not use on sweet potatoes or yams.
- Do not use on muck or peat soils. If cool, wet soil conditions occur after application, **Sharda Metolachlor 86.4EC** may delay maturity and/or reduce yield of Superior and other early maturing potato varieties.
- Do not apply both as a pre-emergence and an incorporated treatment.
- Potatoes treated with **Sharda Metolachlor 86.4EC** must not be harvested within 60 days after the at-planting to drag-off application or within 40 days after a lay-by application.
- Do not use in Kern County, CA.

Sharda Metolachlor 86.4EC COMBINATIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Tank Mixture with Sencor or Lexone

In addition to those weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC** applied in tank mix combination with, or sequentially with, any of the registered Sencor or Lexone formulations, also controls the following broadleaf weeds: hemp sesbania, lambsquarters, prickly sida, ragweed, smartweed, velvetleaf, Venice mallow, and wild mustard.

Sharda Metolachlor 86.4EC applied in tank mix combination with, or sequentially with, any of the registered Sencor or Lexone formulations, partially controls cocklebur, hairy nightshade, and jimsonweed.

Sharda Metolachlor 86.4EC at 1.0-2.0 pts./A plus the labeled Sencor/Lexone use rate may be used pre-emergence through after last hilling. Apply 1.0-1.33 pts./A of **Sharda Metolachlor 86.4EC** on coarse soils and 1.33-2.0 pts./A on other soil textures. Within this rate range, use the lower rate within the specified rate range on soils relatively coarse-textured or low in organic matter; use the higher rate within the specified rate range on soils relatively fine-textured or high in organic matter. Effectiveness will be reduced if later cultural practices expose untreated soil. **Sharda Metolachlor 86.4EC** will not control emerged weeds.

Refer to the Sencor or Lexone labels for precautionary statements, restrictions, application information, and weeds controlled.

Precautions:

- Make post-emergence applications to potatoes only as a directed or semi-directed spray to avoid chlorosis, minor necrosis, or leaf distortion.

Restrictions:

- Do not use **Sharda Metolachlor 86.4EC** + Sencor or Lexone on potatoes in Kern County, CA.
- Do not apply to sweet potatoes or yams.
- Do not harvest potatoes treated with **Sharda Metolachlor 86.4EC** in tank mixture with Sencor or Lexone within 60 days after application.
- Do not harvest potatoes within 40 days after a lay-by application of **Sharda Metolachlor 86.4EC**.
- Do not use this tank mixture on muck or peat soils.

Sharda Metolachlor 86.4EC + Lorox Tank Mixture (East of Rocky Mountains)

Apply **Sharda Metolachlor 86.4EC** in a tank-mix combination with any of the registered Lorox formulations as a pre-emergence broadcast application to potatoes. Apply to the soil surface after planting and before emergence of the crop or after final drag-off according to the rates specified in the **Sharda Metolachlor 86.4EC + Lorox-Potatoes (East of Rocky Mountains)** table.

Sharda Metolachlor 86.4EC + Lorox-Potatoes (East of Rocky Mountains)

SOIL TEXTURE	SOIL TEXTURE	BROADCAST RATES PER ACRE	
		SHARDA METOLACHLOR 86.4EC	LOROX*
1-3% Organic Matter	Coarse (Sandy loam)	1.0 pts.	1.0 - 1.5 lbs.
	Medium (Loam, silt loam, silt)	1.33 pts.	1.5 - 2.0 lbs.
3-5% Organic Matter	Coarse (Sandy loam)	1.33 pts.	1.5 - 2.0 lbs.

	Medium (Loam, silt loam, silt)	1.5 - 2.0 pts.	2.0 - 2.5 lbs.
*When using Lorox L or Lorox DF, use equivalent rates. 1 pt. of Lorox L equals 1 lb. of Lorox DF.			

Restriction:

- Do not use on sands or loamy sands and do not incorporate or spray over the top of emerged potatoes.

Refer to the **PRODUCT INFORMATION** section of this label and to the Lorox label for precautionary statements, restrictions, application instructions, and weeds controlled.

Tank Mixture with Prowl 4E

In addition to the weeds controlled by **Sharda Metolachlor 86.4EC** alone, this tank mixture with Prowl 4E controls kochia, lambsquarters, purslane, annual spurge, stinging nettle, and others specified on the Prowl 4E Alone label. Apply **Sharda Metolachlor 86.4EC** + Prowl 4E pre-emergence, pre-emergence incorporated, or early post-emergence, according to the specific directions on the Prowl 4E label, using the rates in the **Sharda Metolachlor 86.4EC + Prowl 4E-Potatoes** table.

Sharda Metolachlor 86.4EC + Prowl 4E-Potatoes

SOIL TEXTURE	BROADCAST RATES PER ACRE
	SHARDA METOLACHLOR 86.4EC + PROWL 4E*
<3% Organic Matter Coarse Medium Fine	1.0 - 1.33 + 1.0 - 1.5 pts.
	1.33 pts. + 1.5 - 2.0 pts.
	1.33 - 1.67 pts. + 2.0 - 3.0 pts.
3-5% Organic Matter Coarse Medium Fine	1.0 - 1.33 pts. + 1.0 - 1.5 pts.
	1.33 - 1.67 pts. + 2.0 - 3.0 pts.
	1.67 - 2.0 pts. + 3.0 pts.
*When using other formulations of Prowl, use equivalent rates of active ingredient.	

Refer to the **Sharda Metolachlor 86.4EC** and Prowl 4E labels and observe all directions, timings, limitations, precautions, and restrictions concerning the use of these products on potatoes and follow the most restrictive.

Tank Mixture with Prowl 4E + Eptam

In addition to the weeds controlled by **Sharda Metolachlor 86.4EC** alone, this tank mixture will control those species on the Prowl 4E and Eptam labels. Refer to the **Sharda Metolachlor 86.4EC** + Prowl 4E labels for rates of those products and add Eptam 7E at 3.5-7.0 pts./A, depending on geographical area. Refer to the respective **Sharda Metolachlor 86.4EC**, Prowl 4E, and Eptam labels and observe all directions, limitations, precautions, and restrictions concerning the use of these products on potatoes and follow the most restrictive.

SAFFLOWER**Sharda Metolachlor 86.4EC ALONE**

Pre-Plant Incorporated or Pre-Emergence: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Coarse soils (<3% organic matter): Apply 1.0-1.33 pts./A.

Coarse soils (>3% organic matter): Apply 1.33 pts./A.

Medium soils: Apply 1.33-1.67 pts./A.

Fine soils (<3% organic matter): Apply 1.33-1.67 pts./A.

Fine soils (>3% organic matter): Apply 1.67-2.0 pts./A.

GRAIN OR FORAGE SORGHUM (SEED TREATED WITH CONCEP® OR SCREEN®)**Sharda Metolachlor 86.4EC ALONE**

Apply **Sharda Metolachlor 86.4EC** either pre-plant surface, pre-plant incorporated, or pre-emergence, using the appropriate rate specified below. Apply **Sharda Metolachlor 86.4EC** alone only when the sorghum seed has been properly treated by the seed company with Concep or Screen.

Pre-Plant Surface-Applied: Refer to instructions for use of **Sharda Metolachlor 86.4EC** under **Application Instructions**. For minimum-tillage or no-tillage systems only, **Sharda Metolachlor 86.4EC** may be applied up to 45 days before planting in CO, IA, IL, KS, MO, NE, and SD. Use only split applications for treatments made 30-45 days prior to planting with $\frac{2}{3}$ of the broadcast rate applied initially and the remaining $\frac{1}{3}$ at planting. Apply 1.50 pts./A of **Sharda Metolachlor 86.4EC** on medium soils or 1.67 pts./A on fine soils. Treatments less than 30 days prior to planting may be made either as a split or single application. Apply 1.33 pts./A of **Sharda Metolachlor 86.4EC** on coarse soils not more than 2 weeks prior to planting. Under dry conditions, irrigate after application to move **Sharda Metolachlor 86.4EC** into the soil.

Pre-Plant Incorporated or Pre-Emergence: Refer to instructions for use of **Sharda Metolachlor 86.4EC** under **Application Instructions**.

Make broadcast as follows:

Coarse soils: 1.0-1.33 pts./A

Medium soils: 1.33-1.50 pts./A

Fine soils: 1.33-1.67 pts./A

Precautions:

- If sorghum seed is not properly treated with Concep or Screen, **Sharda Metolachlor 86.4EC** will severely injure the crop.
- Under high soil moisture conditions prior to sorghum emergence, injury may occur following the use of **Sharda Metolachlor 86.4EC**. The crop will normally outgrow this effect.

Restrictions:

- Do not use **Sharda Metolachlor 86.4EC** on sorghum grown under dry mulch tillage.
- Except for the split pre-plant surface treatment, do not make more than one application per year.

Sharda Metolachlor 86.4EC COMBINATIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Sharda Metolachlor 86.4EC tank mixtures with AAtrex may be applied in water or fluid fertilizer. Apply **Sharda Metolachlor 86.4EC** in tank mixtures only when the sorghum seed has been properly treated by the seed company with Concep or Screen.

IMPORTANT: FOR TANK MIXTURES WITH AATREX (OR OTHER BRANDS OF ATRAZINE)

If applying **Sharda Metolachlor 86.4EC** in tank mixture with AAtrex, all the restrictions and rate limitations on the AAtrex label must be followed if the label directions are more restrictive/protective than those on this label. In addition, if AAtrex is/must be applied at rates lower than those listed on this label, broadleaf weed control may be affected. Refer to the AAtrex label for weeds controlled at the reduced rates.

Precautions:

Applications of **Sharda Metolachlor 86.4EC** + AAtrex on highly alkaline soils or on eroded areas where calcareous subsoils are exposed may cause sorghum injury.

If sorghum seed is not properly treated with Concep or Screen, **Sharda Metolachlor 86.4EC** + AAtrex may severely injure the crop.

Under high soil moisture conditions prior to sorghum emergence, injury may occur following the use of **Sharda Metolachlor 86.4EC** + AAtrex. The crop will normally outgrow this effect.

Restrictions:

- Do not use **Sharda Metolachlor 86.4EC** + AAtrex on sorghum grown under dry mulch tillage.
- Do not make more than one application per year Except for the split pre-plant surface treatment.

Tank Mixture with AAtrex

In addition to the weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC** + AAtrex also controls the following broadleaf weeds when applied either pre-plant surface, pre-plant incorporated, or pre-emergence:

Cocklebur	Hairy Nightshade	Morningglory	Smartweed
Common Purslane	Lambsquarters	Ragweed	Velvetleaf

Pre-Plant Surface-Applied: Refer to instructions for use of **Sharda Metolachlor 86.4EC** under **Application Instructions**. For minimum-tillage or no-tillage systems only, **Sharda Metolachlor 86.4EC** + AAtrex may be applied up to 45 days prior to planting in IA, IL, eastern KS, MO, NE, and SD. Use only split applications for treatments made 30-45 days prior to planting with 2/3 of the broadcast rate applied initially and the remaining 1/3 at planting. Apply as follows:

Medium soils with >1.5% organic matter: 1.50 pts./A of **Sharda Metolachlor 86.4EC** + 1.7 - 2 lbs./A of AAtrex Nine-O*

Fine soils with <1.5% organic matter: 1.50 pts./A of **Sharda Metolachlor 86.4EC** + 1.7 - 2 lbs./A of AAtrex Nine-O

Fine soils with >1.5% organic matter: 1.67 pts./A of **Sharda Metolachlor 86.4EC** + 2 - 2.2 lbs./A of AAtrex Nine-O

*When using AAtrex 4L, use equivalent rates. One lb. of AAtrex Nine-O equals 1.8 pts. of AAtrex 4L.

Treatments less than 30 days prior to planting may be made either as a split or single application. Under dry conditions, irrigate after application to move **Sharda Metolachlor 86.4EC** + AAtrex into the soil.

Restrictions:

- Do not use on coarse soils.
- Do not use on medium soils with <1.5% organic matter.

Pre-Plant Incorporated or Pre-Emergence: Refer to instructions for use of **Sharda Metolachlor 86.4EC** under **Application Instructions**. Apply as follows:

Medium soils with >1.5% organic matter: 1.0 pts./A of **Sharda Metolachlor 86.4EC** + 1.3 lbs./A of AAtrex Nine-O*

Fine soils with <1.5% organic matter: 1.0 pts./A of **Sharda Metolachlor 86.4EC** + 1.3 lbs./A of AAtrex Nine-O

Fine soils with >1.5 organic matter: 1.2-1.33 pts./A of **Sharda Metolachlor 86.4EC** + 1.6 - 1.8 lbs./A of AAtrex Nine-O

*When using AAtrex 4L, use equivalent rates. One lb. of AAtrex Nine-O equals 1.8 pts. of AAtrex 4L.

Restrictions:

- Do not use on coarse soils.
- Do not use on medium soils with <1.5% organic matter.
- Do not use in NM, OK, or TX, except in northeast OK and the TX Gulf Coast and Blacklands areas.
- Do not apply pre-plant incorporated in AZ or the Imperial Valley of CA.

Tank Mixture of Sharda Metolachlor 86.4EC or Sharda Metolachlor 86.4EC + AAtrex, with Gramoxone Extra, Landmaster BW, or Roundup for Minimum-Tillage or No-Tillage Systems

In minimum-tillage or no-tillage systems where sorghum (seed treated with Concep or Screen) is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Extra, Landmaster BW, or Roundup may be tank mixed with **Sharda Metolachlor 86.4EC** or **Sharda Metolachlor 86.4EC** + AAtrex. In Minimum-Tillage and No-Tillage systems, mix with Gramoxone Extra for control of most emerged annual weeds and suppression of perennial weeds; or with Landmaster BW for suppression of emerged field bindweed and control or suppression of annual weeds; or with Roundup for control of most emerged annual and perennial weeds. Refer to the label of each product used in combination and observe the planting details, restrictions, and all other precautions and limitations.

The **Sharda Metolachlor 86.4EC** or **Sharda Metolachlor 86.4EC** + AAtrex portion of the tank mixture provides pre-emergence control of the weeds listed on this label under the respective sections.

Application Instructions: Apply before, during, or after planting, but before sorghum emerges, at the appropriate rates listed under **Grain or Forage Sorghum-Sharda Metolachlor 86.4EC Alone** or **-Sharda Metolachlor 86.4EC Combinations- Sharda Metolachlor 86.4EC + AAtrex**, respectively. Add Gramoxone Extra, Landmaster BW, or Roundup at the following broadcast rates:

Gramoxone Extra:

Weeds 1-3": 1.5-2 pts./A

Weeds 3-6": 2-2.5 pts./A

Weeds 6": 2.5-3 pts./A

Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50-74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6".

Landmaster BW: 27-54 oz./A depending on weed species and size. See the Landmaster BW label for weeds controlled, rates for specific weeds, and other information concerning use.

Roundup: See the Roundup or Roundup RT label for weeds controlled, rates, and other use directions. Apply in a minimum of 20 gals. of water per acre with conventional spray equipment.

SOYBEANS

Sharda Metolachlor 86.4EC ALONE

Apply **Sharda Metolachlor 86.4EC**, either pre-plant surface-applied, pre-plant incorporated, pre-emergence, or post-emergence using the appropriate rate specified below.

Pre-Plant Surface-Applied, Pre-Plant Incorporated, Pre-Emergence: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Post-Emergence: Follow the **Tank Mixture** instructions under **Post-Emergence Applications**.

Pre-Plant Surface-Applied

Fall Application (Apply after September 30th in MN, ND, SD, WI and North of Route 30 in IA; Apply after October 15th north of Route 91 in NE and South of Route 30 in IA; Apply after October 31st north of Route 136 in IL): In all locations, apply to crop stubble after harvest when the sustained soil temperature at a 4" depth is less than 55°F and falling. In minimum-till or no-tillage systems on soils having greater than 2.5% organic matter, use 1.67-2.0 pts./A on medium-textured and 2.0 pts./A on fine-textured soils. A tillage operation may precede the application. Minimize furrow and ridge formation in the tillage operations.

Restrictions:

- If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate for soybeans.
- A fall and/or a spring tillage may follow application, but do not exceed an incorporation depth greater than 2-3".

- Do not apply to frozen ground.

Use on medium and fine soils with minimum-tillage or no-tillage systems in CO, CT, DE, IA, IL, IN, KS, KY, MA, MD, ME, MI, MN, MO, MT, ND, NE, NH, NY, OH, PA, RI, SD, TN, VA, VT, WI, WV, and WY. Apply 2/3 the labeled rate of **Sharda Metolachlor 86.4EC** (1.67 pts./A on medium soils and 2.0 pts./A on fine soils) as a split treatment 30-45 days prior to planting and the remainder at planting. Applications made less than 30 days before planting may be as either a split or single treatment. Apply 1.33 pts./A on coarse soils not more than 2 weeks prior to planting.

Pre-Plant Incorporated or Pre-Emergence: Apply **Sharda Metolachlor 86.4EC** as follows:

Coarse soils with <3% organic matter: 1.0-1.33 pts./A

Coarse soils with >3% organic matter: 1.33 pts./A

Medium soils: 1.33-1.67 pts./A

Fine soils with <3% organic matter: 1.33-1.67 pts./A

Fine soils with >3% organic matter: 1.67-2.0 pts./A

Restrictions:

- The total **Sharda Metolachlor 86.4EC** rate applied to soybeans during any one crop must not exceed 2.75 pts./A.
- Do not graze or feed treated soybean forage, hay, or straw to livestock 30 days following treatment.

Note: On soybeans, **Sharda Metolachlor 86.4EC** may be used up to 2.75 pts./A as a pre-plant surface-applied, pre-plant incorporated, or pre-emergence treatment on soils having an organic matter content between 6-20%.

Post-Emergence:

From emergence up through the third trifoliate leaf stage:

Apply 1.0-1.33 pts./A as a post-emergence treatment to soybeans from emergence up through the **third trifoliate leaf stage**. **Sharda Metolachlor 86.4EC** will not control emerged weeds so it must be applied to a weed-free surface or in a tank mixture with products that provide post-emergence control of weeds present at the time of application.

From emergence up through the fifth trifoliate leaf stage:

Apply 1.0-1.33 pts./A as a post-emergence treatment to soybeans from emergence up through the **fifth trifoliate leaf stage**. **Sharda Metolachlor 86.4EC** will not control emerged weeds so it must be applied to a weed-free surface or in a tank mixture with products that provide post-emergence control of weeds present at the time of application.

Note: Make post-emergence applications at least 90 days before harvest.

Restrictions:

- Do not apply more than 1.33 pts./A post-emergence.
- Do not graze or feed treated forage or hay from soybeans to livestock following a post-emergence application.
- Do not make a post-emergence application of **Sharda Metolachlor 86.4EC** if a pre-plant surface, pre-plant incorporated, or
- Pre-emergence application of metolachlor products have already been applied.

Sharda Metolachlor 86.4EC COMBINATIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Water or fluid fertilizer may be used as carrier for **Sharda Metolachlor 86.4EC** in combination with Sencor, Lexone, Lorox, Lorox Plus, Gemini, Canopy, Preview, Pursuit, Scepter, Sonalan, or Command.

Note: For all of the following combinations, **Sharda Metolachlor 86.4EC** may be used up to 2.5 pts./A on soils having an organic matter content between 6-20%.

Restriction:

- Do not apply more than 2.75 pts./A of **Sharda Metolachlor 86.4EC** during any one crop year.

Pre-Plant/Pre-Emergence Applications

Tank Mixture with Sencor or Lexone

In addition to those weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC** + Sencor or Lexone, when applied as directed, controls the following broadleaf weeds:

Hairy Nightshade	Prickly Sida	Velvetleaf
Hemp Sesbania	Ragweed	Venice Mallow
Lambsquarters	Smartweed	Wild Mustard

Sharda Metolachlor 86.4EC + Sencor or Lexone, when applied as directed, partially controls cocklebur and jimsonweed.

Apply **Sharda Metolachlor 86.4EC** and Sencor or Lexone pre-plant incorporated or pre-emergence using the appropriate rates from the **Sharda Metolachlor 86.4EC + Sencor or Lexone-Soybeans** table.

Pre-Plant Incorporated or Pre-Emergence:

Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Procedures**.

Sequential: Apply **Sharda Metolachlor 86.4EC** alone Pre-plant Incorporated, as specified in the **Sharda Metolachlor 86.4EC + Sencor or Lexone-Soybeans** table for this tank mixture. Follow with a pre-emergence application of Sencor or Lexone during planting (behind the planter) or after planting but before weeds or soybeans emerge. Refer to the Sencor or Lexone labels for planting details and soybean variety restrictions.

Sharda Metolachlor 86.4EC + Sencor or Lexone-Soybeans

Do not use on muck or peat with >20% organic matter.

SOIL TEXTURE**	BROADCAST RATES PER ACRE
	SHARDA METOLACHLOR 86.4EC + SENCOR/LEXONE DF*
0.5 - <3% Organic Matter Coarse: Loamy sand (>2% organic matter), sandy loam Medium Fine Mississippi Delta only (Silty clay, clay)	0.85 - 1.0 pt. + 0.33 lb. 1.0 - 1.33 pts. + 0.5 lb. 1.33 pts. + 0.67 lb. 1.33 pts. + 1.0 lb.
>3% Organic Matter Coarse: Loamy sand (>2% organic matter), sandy loam Medium Fine Mississippi Delta only (Silty clay, clay)	1.0 pt. + 0.5 lb. 1.33 pts. + 0.67 lb.*** 1.33 - 1.67 pts. + 0.67 lb. 1.33 - 1.67 pts. + 1.0 lb.

*When using Sencor 4 or Lexone 4L, multiply lbs. of DF by 1.5 to get pts./A.
 **On all sand and on loamy sand with <2% organic matter, do not use this tank mixture pre-emergence or the sequential treatment. Do not use the tank mixture pre-plant incorporated on any sand, loamy sand, or sandy loam.
 ***Use 0.5 lb./A if applied pre-plant incorporated.

Precaution:

- Heavy rains soon after application can cause crop injury, especially in poorly drained areas where water stands for several days.

Restriction:

- Do not use the tank mix or sequential application on soil with <0.5% organic matter or on alkaline soil with a pH >7.4.

Tank Mixture with Lorox

In addition to those weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC + Lorox**, applied pre-emergence, controls lambsquarters, prickly sida, ragweed, smartweed, Venice mallow, and wild mustard.

Sharda Metolachlor 86.4EC + Lorox, when applied as directed, partially controls cocklebur, jimsonweed, morningglory, and velvetleaf.

Pre-Emergence: Apply during planting (behind planter) or after planting, but before weeds or soybeans emerge. Refer to the Lorox label for planting details. Apply the appropriate rates from the **Sharda Metolachlor 86.4EC + Lorox-Soybeans** table.

Precaution:

- To avoid crop injury, do not use on soil with less than 0.5% organic matter.

Sharda Metolachlor 86.4EC + Lorox-Soybeans

Do not use on muck or peat with >20% organic matter.

SOIL TEXTURE*, **	BROADCAST RATES PER ACRE
	SHARDA METOLACHLOR 86.4EC + LOROX DF***
0.5 - <3% Organic Matter Coarse Medium Fine	0.85 pt. + 1 lb. 1.0 pt. + 1 - 1.5 lbs. 1.33 pts. + 2 lbs.
>3% Organic Matter Coarse Medium Fine	1.0 pt. + 1 - 1.5 lbs. 1.33 pts. + 1.5 - 2 lbs. 1.33 - 1.67 pts. + 2.5 - 3 lbs.

*Do not use on sand, gravelly soils, or exposed subsoils.
 **Do not use on loamy sand except in the northeastern U.S. on loamy sand with >1% organic matter.
 ***When using Lorox L or Lorox DF, use equivalent rates. One pt. of Lorox L equals 1 lb. of Lorox DF.

Tank Mixture with Treflan

Sharda Metolachlor 86.4EC + Treflan tank mix applied pre-plant incorporated controls those weeds listed under the **Sharda Metolachlor 86.4EC Applied Alone** section and those weeds listed for Treflan Alone on the Treflan label. **Sharda Metolachlor 86.4EC + Treflan** may be applied by ground or by aerial equipment and incorporated up to 14 days before planting. Follow the procedures on the Treflan and **Sharda Metolachlor 86.4EC** labels using equipment that provides uniform 2-inch incorporation.

Apply **Sharda Metolachlor 86.4EC + Treflan** tank mix, using the appropriate rate from the **Soybeans-Sharda Metolachlor 86.4EC Alone** section of this label and the Treflan Alone section of the Treflan label for the specific soil texture/organic matter classification and weed species expected.

To control DNA-resistant goosegrass* and other species on the respective labels where the soil organic matter is 3% or less, apply the rate listed in the **Sharda Metolachlor 86.4EC + Treflan-Organic Matter Content Less Than 3%** table.

Sharda Metolachlor 86.4EC + Treflan-Organic Matter Content Less Than 3%

Follow all restrictions and precautions on the respective Treflan label and in the **Soybeans- Sharda Metolachlor 86.4EC Alone** section of this label.

SOIL TEXTURE	BROADCAST RATES PER ACRE*
	SHARDA METOLACHLOR 86.4EC + TREFLAN EC**
<3% Organic Matter Coarse Medium Fine	0.85 - 1.0 pt. 1.0 pt. 1.33 pts.
	1 pt. 1.5 pts. 2 pts.
	1.5 pts. 1.5 pts. 2.0 pts.
<p>*Where a range of rates is given for Sharda Metolachlor 86.4EC, use the minimum rate within the specified rate range where DNA-resistant goosegrass is the predominant species.</p> <p>**When Treflan MTF or Treflan 5 is used, use comparable rates. Multiply pts. of Treflan E.C. by 1 for Treflan MTF and by 0.8 for Treflan 5.</p>	

Tank Mixture with Scepter

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Scepter alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Scepter label for weeds controlled by Scepter. Refer to the Scepter label for geographical locations where this tank mixture may be applied.

Apply **Sharda Metolachlor 86.4EC + Scepter** pre-plant incorporated or pre-emergence using rates in the **Sharda Metolachlor 86.4EC + Scepter-Soybeans** table. Follow use directions under **Application Instructions** on the Scepter label. For Pre-Plant Incorporated Applications, apply and incorporate within 30 days before planting. Observe all other restrictions, precautions and limitations on the Scepter labels.

Sharda Metolachlor 86.4EC + Scepter-Soybeans

Do not use on muck or peat with >20% organic matter.

SOIL TEXTURE	BROADCAST RATES PER ACRE
	SHARDA METOLACHLOR 86.4EC + SCEPTER
<3% Organic Matter Coarse Medium Fine	0.85 pt. + 0.67 pt. 1.0 + 0.67 pt. 1.33 pts. + 0.67 pt.
	1.0 pt. + 0.67 pt. 1.33 pts. + 0.67 pt. 1.33 - 1.67 pts.* + 0.67 lb.
<p>*Use the higher rate within the specified rate range of Sharda Metolachlor 86.4EC if heavy weed infestations are expected.</p>	

Restrictions:

- Do not apply within 90 days of harvest.
- Do not graze or feed treated soybean forage, hay, or straw to livestock.

Tank Mixture with Lorox Plus

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Lorox Plus alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Lorox Plus label for weeds controlled by Lorox Plus.

Apply **Sharda Metolachlor 86.4EC + Lorox Plus** pre-emergence after planting, but before soybeans emerge, using rates in the **Sharda Metolachlor 86.4EC+ Lorox Plus-Soybeans** table. Follow all use directions, limitations, restrictions, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and **Lorox Plus** labels.

Sharda Metolachlor 86.4EC+ Lorox Plus-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE
	SHARDA METOLACHLOR 86.4EC + LOROX PLUS (60 DF)
0.5%-3% Organic Matter	
Coarse	0.85 pt. + 12 - 14 oz.
Medium	1.0 pt. + 14 - 16 oz.
Fine	1.33 pts. + 16 - 18 oz.

Restriction:

- Do not apply to sand, or to any soil <0.5% organic matter, or to any soil with pH >6.8.

Tank Mixture with Gemini

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by **Gemini** alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the **Gemini** label for weeds controlled by **Gemini**. Apply **Sharda Metolachlor 86.4EC + Gemini** pre-emergence after planting, but before soybeans emerge, using rates in the **Sharda Metolachlor 86.4EC + Gemini-Soybeans** table.

Note: Follow all use directions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and **Gemini** labels.

Sharda Metolachlor 86.4EC + Gemini-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE
	SHARDA METOLACHLOR 86.4EC + GEMINI (60 DF)
0.5% -3% Organic Matter	
Coarse (Sandy loam only)	0.85 pt. + 12 - 16 oz.
Medium	1.0 pt. + 16 - 20 oz.
Fine	1.33 pts. + 20 - 24 oz.

Restriction:

- Do not apply to sand or loamy sand, or to any soil <0.5% organic matter, or to any soil with pH >7.0, except as in the directions for use on the **Gemini** label.

Tank Mixture with Canopy

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by **Canopy** alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the **Canopy** label for weeds controlled by **Canopy**. Apply pre-plant incorporated or pre-emergence using the appropriate rates from the **Sharda Metolachlor 86.4EC + Canopy-Soybeans** table.

Pre-Plant Incorporated: Apply within 2 weeks of planting. Uniformly incorporate into the top 1-2 inches of soil before planting soybeans.

Pre-Emergence: Apply after planting, but before soybeans emerge.

Follow all use directions, varietal restrictions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and **Canopy** labels.

Sharda Metolachlor 86.4EC + Canopy-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE
	SHARDA METOLACHLOR 86.4EC + CANOPY
<3% Organic Matter	
Coarse	0.85 pt. + *
Medium	1.0 pt. + *
Fine	1.33 pts. + *
>3% Organic Matter	
Coarse	1.0 pt. + *
Medium	1.33 pts. + *
Fine	1.33 - 1.67 pts. + *

*Refer to the **Canopy** label for appropriate rate according to geographical location, soil and organic matter classification, and pH limitations.

Restriction:

- Do not apply to sand, or to any soil <0.5% organic matter, or to any soil with pH >7.0, except as in the directions for use on the Canopy label.

Tank Mixture with Preview

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Preview alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Preview label for weeds controlled by Preview. Apply pre-plant incorporated or pre-emergence, using the appropriate rates from the **Sharda Metolachlor 86.4EC + Canopy-Soybeans** table.

Pre-Plant Incorporated: Apply within 2 weeks of planting. Uniformly incorporate into the top 1-2 inches of soil before planting soybeans.

Pre-Emergence: Apply after planting, but before soybeans emerge.

Note: Follow all use directions, varietal restrictions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and Preview labels.

Sharda Metolachlor 86.4EC + Preview-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE	
	SHARDA METOLACHLOR 86.4EC + PREVIEW 75 DF	
0.5-3% Organic Matter		
Coarse	0.85 pt. + 6 oz.	
Medium	1.0 pt. + 7 oz.	
Fine	1.33 pts. + 8 oz.	
3-5% Organic Matter		
Coarse	1.0 pt. + 7 oz.	
Medium	1.33 pts. + 8 oz.	
Fine	1.33 - 1.67 pts. + 9 - 10 oz.	

Restriction:

- Do not apply to sand, or to any soil <0.5% organic matter, or to any soil with pH >6.8.

Tank Mixture with Command

Before making applications, read and strictly follow all use directions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and Command labels.

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Command alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Command label for weeds controlled by Command. Apply **Sharda Metolachlor 86.4EC + Command** pre-plant incorporated, using rates in the **Sharda Metolachlor 86.4EC + Command-Soybeans** table. Follow all Command application instructions as to incorporation interval, geographical location, equipment operation, soil moisture conditions, etc.

Sharda Metolachlor 86.4EC + Command-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE		
	SHARDA METOLACHLOR 86.4EC +	Command 4E	
		Northern Region	Southern Region
0.5 - 3% Organic Matter		1.5 - 2 pts.	2 - 2.5 pts.
Coarse	0.85 pt.		
Medium	1.0 pt.		
Fine	1.33 pts.		
>3% Organic Matter			
Coarse	1.0 pt.		
Medium	1.33 pts.		
Fine	1.33 - 1.67 pts.		

Tank Mixture with Sonalan

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Sonalan alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Sonalan label for weeds controlled by Sonalan. Apply **Sharda Metolachlor 86.4EC** and Sonalan pre-plant incorporated using the appropriate rates from the **Sharda Metolachlor 86.4EC + Sonalan-Soybeans** table.

Pre-Plant Incorporated: Follow soil preparation procedures for Sonalan. Refer to the Sonalan/**Sharda Metolachlor 86.4EC** Tank Mixture label for incorporation specifications.

Sequential: Apply Sonalan alone pre-plant incorporated as specified on the Sonalan label. Follow with a pre-emergence application of **Sharda Metolachlor 86.4EC** during planting (behind the planter) or after planting but before weeds or soybeans emerge.

Sharda Metolachlor 86.4EC + Sonalan-Soybeans

Do not use on muck or peat with >20% organic matter.

SOIL TEXTURE	BROADCAST RATES PER ACRE
	SHARDA METOLACHLOR 86.4EC + SONALAN
<3% Organic Matter Coarse Medium* Fine	1.0 - 1.33 pts. + 1.25 - 2.0 pts.
	1.33 - 1.67 pts. + 1.75 - 2.50 pts.
	1.33 - 1.67 pts. + 2.25 - 3.0 pts.
>3% Organic Matter Coarse Medium* Fine	1.33 pts. + 1.25 - 2.0 pts.
	1.33 - 1.67 pts. + 1.75 - 2.50 pts.
	1.67 - 2.0 pts. + 2.25 - 3.0 pts.

*For eastern black nightshade on these soils, apply Sonalan at 3 pts./A on medium- and 3.5 pts./A on fine textured soils, and follow with 2 incorporation passes.

Follow all use directions, limitations, restrictions, precautions, and information regarding application to soybeans on the **Sharda Metolachlor 86.4EC** and Sonalan labels.

Tank Mixture with Pursuit

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Pursuit alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Pursuit label for weeds controlled by Pursuit. Refer to the Pursuit label for geographical locations where this tank mixture may be applied.

Apply **Sharda Metolachlor 86.4EC** + Pursuit early pre-plant, pre-plant incorporated, or pre-emergence after planting using rates in the **Sharda Metolachlor 86.4EC + Pursuit-Soybeans** table. Application can be made in water or liquid fertilizer. Follow all use directions under Soil Applications on the Pursuit label. For early pre-plant and pre-plant incorporated applications, apply within 30 days before planting.

Note: Follow all use directions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and Pursuit labels.

Sharda Metolachlor 86.4EC + Pursuit-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE
	SHARDA METOLACHLOR 86.4EC + PURSUIT
<3% Organic Matter Coarse Medium Fine	0.85 pt. + 0.25 pt.
	1.0 pt. + 0.25 pt.
	1.33 pts. + 0.25 pt.
>3% Organic Matter Coarse Medium Fine	1.0 pts. + 0.25 pt.
	1.33 pts. + 0.25 pt.
	1.33 - 1.67 pts. + 0.25 pt.

Sequential: Apply **Sharda Metolachlor 86.4EC** early pre-plant, pre-plant incorporated, or pre-emergence after planting at 0.85 pt./A on coarse soils and 1.0 pt./A on medium- and fine-textured soils. Follow with a sequential post-emergence application of Pursuit to control emerged weeds according to the Pursuit label. **Sharda Metolachlor 86.4EC** will improve the consistency and level of control from Pursuit on most grass species. Refer to the Pursuit post-emergence label for a listing of weeds controlled, application rate, and growth stage limitations.

Tank Mixture with Lexone, Sencor, Scepter, Lorox, Lorox Plus, Gemini, Canopy, Preview, or Pursuit, plus Gramoxone Extra or Roundup for Minimum-Tillage or No-Tillage Systems

In minimum-tillage or no-tillage systems where soybeans are planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Extra or Roundup may be added to a tank mix of either **Sharda Metolachlor 86.4EC** + Sencor or Lexone, **Sharda Metolachlor 86.4EC** + Scepter, **Sharda Metolachlor 86.4EC** + Lorox, **Sharda Metolachlor 86.4EC** + Lorox Plus, **Sharda Metolachlor 86.4EC** + Gemini, **Sharda Metolachlor 86.4EC** + Canopy, **Sharda Metolachlor 86.4EC** + Preview, or **Sharda Metolachlor 86.4EC** + Pursuit. When used as directed, the Gramoxone Extra portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds. Roundup combinations will control emerged annual and perennial weeds when applied as directed on the Roundup label. The **Sharda Metolachlor 86.4EC** + Sencor / Lexone, Scepter, Lorox, Lorox Plus, Gemini, Canopy, Preview, or Pursuit portion of the tank mixture provides pre-emergence control of the weeds listed on this label in the tank mixture section for **Sharda Metolachlor 86.4EC** + Sencor / Lexone, **Sharda Metolachlor 86.4EC** + Scepter, **Sharda Metolachlor 86.4EC** + Lorox, **Sharda Metolachlor 86.4EC** + Lorox Plus, **Sharda Metolachlor 86.4EC** + Gemini, **Sharda Metolachlor 86.4EC** + Canopy, **Sharda Metolachlor 86.4EC** + Preview, and **Sharda Metolachlor 86.4EC** + Pursuit, respectively.

Refer to the label of each product used in combination and observe the planting details, soybean variety restrictions, information regarding application to soybeans, geographical restrictions, and all other precautions and limitations. Refer below for rates of Gramoxone Extra or Roundup, **Sharda Metolachlor 86.4EC** + Sencor / Lexone, **Sharda Metolachlor 86.4EC** + Scepter, **Sharda**

Metolachlor 86.4EC + Lorox, Sharda Metolachlor 86.4EC + Lorox Plus, Sharda Metolachlor 86.4EC + Gemini, Sharda Metolachlor 86.4EC + Canopy, Sharda Metolachlor 86.4EC + Preview, and Sharda Metolachlor 86.4EC + Pursuit, respectively.

Application: Apply before, during, or after planting, but before the soybeans emerge, at the rates specified below. Add Gramoxone Extra or Roundup at the following broadcast rates:

Gramoxone Extra:

Weeds 1-3": 1.5-2 pts./A

Weeds 3-6": 2-2.5 pts./A

Weeds 6": 2.5-3 pts./A

Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50-74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6".

Restriction: Do not apply combinations containing Gramoxone Extra in suspension type liquid fertilizers as the activity of paraquat will be reduced.

Roundup: See the Roundup or Roundup RT label for weeds controlled, rates, and other use directions. Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.

Sharda Metolachlor 86.4EC + Lexone / Sencor + Gramoxone Extra or Roundup

Loamy sand >2% organic matter: Apply 1.0 pt. / A of Sharda Metolachlor 86.4EC + 0.33 - 0.5 lb./A of Sencor or Lexone DF.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 0.5-0.67 lb./A of Sencor or Lexone DF.

Fine soils: Apply 1.33-1.67 pts./A of Sharda Metolachlor 86.4EC + 0.67 lb./A of Sencor or Lexone DF.

When using Sencor 4 or Lexone 4L, multiply lbs. of DF by 1.5 to get pts./A.

If heavy rain occurs soon after application, crop injury may result, especially in poorly drained areas where water stands for several days or where the seeding slit has not been properly closed.

Restriction:

- Do not use this tank mixture on soil with <0.5% organic matter, on alkaline soil with a pH >7.4, or on all sand and loamy sand with <2% organic matter.

Sharda Metolachlor 86.4EC + Scepter + Gramoxone Extra or Roundup

Coarse soils: Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 0.67 pt./A of Scepter.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 0.67 pt./A of Scepter.

Fine soils: Apply 1.67 pts. /A of Sharda Metolachlor 86.4EC + 0.67 pt./A of Scepter.

Restrictions:

- Do not apply within 90 days of harvest.
- Do not graze or feed treated soybean forage, hay, or straw to livestock.

Sharda Metolachlor 86.4EC + Lorox + Gramoxone Extra or Roundup

Coarse soils: Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 1-1.5 lbs./A of Lorox DF**.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 1-2 lbs./A of Lorox DF.

Fine soils: Apply 1.33-1.67 pts./A of Sharda Metolachlor 86.4EC + 2-3 lbs./A of Lorox DF.

Restrictions:

- Do not use on soil with <0.5% organic matter.
- Do not use on loamy sand except in the northeastern U.S.
- Do not use loamy sand with >1% organic matter.
- Do not use on sand, gravelly soils, or exposed subsoils.

**When using Lorox L or Lorox DF, use equivalent rates. One pt. of Lorox L equals 1.0 lb. of Lorox DF.

Sharda Metolachlor 86.4EC + Lorox Plus + Gramoxone Extra or Roundup

Use only soils with 0.5-3% organic matter. Do not apply to sand or to any soil with pH >6.8.

Coarse soils: Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 12-14 oz./A of Lorox Plus 60DF.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 14-16 oz./A of Lorox Plus.

Fine soils: Apply 1.33-1.67 pts./A of Sharda Metolachlor 86.4EC + 16-18 oz./A of Lorox Plus.

Sharda Metolachlor 86.4EC + Gemini + Gramoxone Extra or Roundup

Use only where soils have 0.5-3% organic matter. Do not apply to sand or loamy sand, or to any soil <0.5% organic matter, or to any soil with pH >7.0, except as specified on the Gemini label.

Coarse soils (sandy loam only): Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 12-16 oz./A of Gemini 60DF.

Medium soils: Apply 1.33 pts./A of **Sharda Metolachlor 86.4EC** + 16-20 oz./A of Gemini.
Fine soils: Apply 1.33-1.67 pts./A of **Sharda Metolachlor 86.4EC** + 20-24 oz./A of Gemini.

Sharda Metolachlor 86.4EC + Canopy + Gramoxone Extra or Roundup

Use only where soils have 0.5-5% organic matter. Do not apply to sand, or to any soil with <0.5% organic matter, or to any soil with pH >7.0, except as specified on the Canopy label. Refer to the Canopy label for appropriate rate according to geographical location, soil and organic matter classification, pH limitations, and all other use directions.

Coarse soils (except sand): Apply 1.0 pt./A of **Sharda Metolachlor 86.4EC**.

Medium soils: Apply 1.33 pts./A of **Sharda Metolachlor 86.4EC**.

Fine soils: Apply 1.33-1.67 pts./A of **Sharda Metolachlor 86.4EC**.

Sharda Metolachlor 86.4EC + Preview + Gramoxone Extra or Roundup

Use only where soils have 0.5-5% organic matter. Do not apply to sand, or to any soil with <0.5% organic matter, or to any soil with pH >6.8.

Coarse soils (except sand): Apply 1.0 pt./A of **Sharda Metolachlor 86.4EC** + 6* - 7 oz./A of Preview 75DF.

Medium soils: Apply 1.33 pts./A of **Sharda Metolachlor 86.4EC** + 7* - 8 oz./A of Preview.

Fine soils: Apply 1.33-1.67 pts./A of **Sharda Metolachlor 86.4EC** + 8* to 9 - 10 oz./A of Preview.

*Use this rate where the soil organic matter is 0.5-3.0% range.

Sharda Metolachlor 86.4EC + Pursuit + Gramoxone Extra or Roundup

Coarse soils: Apply 1.0 pt./A of **Sharda Metolachlor 86.4EC** + 0.25 pt./A of Pursuit.

Medium soils: Apply 1.33 pts./A of **Sharda Metolachlor 86.4EC** + 0.25 pt./A of Pursuit.

Fine soils: Apply 1.67 pts./A of **Sharda Metolachlor 86.4EC** + 0.25 pt./A of Pursuit.

Post-Emergence Applications

Tank Mixture with Glyphosate Products

Sharda Metolachlor 86.4EC at 1.0-1.33 pts./A may be tank mixed with glyphosate products at labeled rates and applied from emergence up through the 3rd - 5th trifoliate leaf stage of Roundup Ready or glyphosate-tolerant soybeans. **Sharda Metolachlor 86.4EC** alone will not control emerged weeds. Use this treatment only on soybeans designated for use with glyphosate (e.g., Roundup Ready or glyphosate-tolerant soybeans). The glyphosate product must be registered for post-emergence use in Roundup Ready or glyphosate-tolerant soybeans.

Tank Mixture with Glufosinate Ammonium (Liberty) Products

Sharda Metolachlor 86.4EC at 1.0-1.33 pts./A may be tank mixed with glufosinate products at labeled rates and applied from emergence up through the 3rd - 5th trifoliate leaf stage of soybeans. **Sharda Metolachlor 86.4EC** alone will not control emerged weeds. Use this treatment only on soybeans designated for use with glufosinate (e.g., Liberty Link). The use of adjuvants such as COC or UAN with **Sharda Metolachlor 86.4EC** may result in temporary crop injury.

Restrictions:

- Do not apply more than 1.33 pts./A post-emergence.
- Do not graze or feed treated forage or hay from soybeans to livestock following a post-emergence application.

Follow the tank mix product label for adjuvant instructions. Make post-emergence application at least 90 days before harvest.

TOMATOES

Transplanted Tomatoes: **Sharda Metolachlor 86.4EC** may be applied pre-plant incorporated or pre-plant before transplanting. If the latter method is used, keep soil disturbance to a minimum during transplanting. Application may also be made post-directed to transplants after the first settling rain or irrigation. When an application is made post-directed, apply in a minimum of 20 gallons of water per acre and minimum contact with tomato plants. **Sharda Metolachlor 86.4EC** will not control emerged weeds. In bedded transplanted tomatoes, apply **Sharda Metolachlor 86.4EC** pre-plant non-incorporated to the top of the pressed bed, as the last step, prior to laying plastic. **Sharda Metolachlor 86.4EC** may also be used to treat row-middles in bedded tomatoes, as long as the total amount of **Sharda Metolachlor 86.4EC** does not exceed the maximum allowed per crop.

Seeded Tomatoes: **Sharda Metolachlor 86.4EC** may be applied post-directed to direct seeded tomatoes. Tomato plants must be at least 4" tall at the time of application and the product must be applied in a minimum of 20 gallons of water per acre. Minimize spray contact with tomato plants. **Sharda Metolachlor 86.4EC** will not control emerged weeds.

Tomato Use Rates:

Coarse soils: Apply **Sharda Metolachlor 86.4EC** at 1.0-1.33 pts./A if organic matter content is <3% or 1.33 pts./A if the organic matter is >3%.

Medium soils: Apply **Sharda Metolachlor 86.4EC** at 1.33-1.67 pts./A.

Fine soils: Apply **Sharda Metolachlor 86.4EC** at 1.33-1.67 pts./A if organic matter content is <3% or 1.67-2.0 pts./A if the organic matter content is >3%. Apply by ground application only.

Precautions:

- **Sharda Metolachlor 86.4EC** may damage transplants that have been weakened by any cause. To prevent damage, plant only healthy transplants.
- In transplanted tomatoes, if **Sharda Metolachlor 86.4EC** is applied pre-plant incorporated, incorporate to a depth less than the depth of transplanting, and use the lower rate within the specified rate range for the given soil type, or damage may occur.
- For row middle applications where tomatoes are grown on sandy soils and where high soil moisture conditions can exist (i.e. low binding and high evaporation conditions), as may be found in the States of Florida, Georgia, Maryland, and Virginia, there is potential for crop injury in the form of leaf epinasty. The risk of this type of injury can be reduced by:
 - Incorporating the **Sharda Metolachlor 86.4EC** immediately following application.
 - Applying the **Sharda Metolachlor 86.4EC** seven or more days before transplanting (but only after the beds have been formed).
 - Minimizing the application of **Sharda Metolachlor 86.4EC** onto the plastic of the bed
 - Any combination of the above.

Restrictions:

- Do not apply **Sharda Metolachlor 86.4EC** within 90 days of tomato harvest.
- Do not exceed the maximum label rate for the soil texture per year.
- Do not apply more than 1 post-emergence application per year.
- Do not apply to varieties or cultivars with unknown tolerance to **Sharda Metolachlor 86.4EC**.
- Do not plant when wet, cool, or unfavorable growing conditions exist.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Storage: This product may be stored at temperatures down to 30°F below 0°F. Keep from freezing. DO NOT store below 32°F.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA region office for guidance.

Container Handling:

NONREFILLABLE CONTAINER (EQUAL TO OR LESS THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available.

NONREFILLABLE CONTAINER (GREATER THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available.

REFILLABLE CONTAINER: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Bottom Discharge IBC (e.g., Schuetz Caged IBC or Snyder Square Stackable). Pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To pressure rinse the container before final disposal, empty the remaining contents from the IBC into application equipment or mix tank. Raise the bottom of the IBC by 1.5 inches on the side which is opposite of the bottom discharge valve to promote more complete product removal. Completely pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve.

Top Discharge IBC, Drums, Kegs (e.g. Snyder 120 Next Gen, Bonar B120, Drums and Kegs).

Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To triple rinse the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Rinse all interior surfaces. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Sharda USA LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Sharda USA LLC and Seller harmless for any claims relating to such factors.

Sharda USA LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal

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Authority and Command is a trademark of FMC Corporation.
Pioneer is a registered trademark of Agco Corporation.

<div style="display: inline-block; text-align: center;"> United States Environmental Protection Agency Washington, DC 20460 </div>		<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Registration Amendment Other	OPP Identifier Number
		Application for Pesticide - Section I		
		1. Company/Product Number 83529-56		
4. Company/Product (Name) Sharda USA LLC / Sharda Metolachlor 86.4EC		2. EPA Product Manager Kathryn Montague PM# 23		3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
5. Name and Address of Applicant (Include Zip Code) Sharda USA LLC c/o Wagner Regulatory Associates, Inc. P.O. Box 640 Hockessin, DE 19707 <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No.: Product Name:		
Section - II				
<input type="checkbox"/> Amendment - Explain below. <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ <input type="checkbox"/> Resubmission in response to Agency letter dated _____ <input type="checkbox"/> "Me Too" Application. <input checked="" type="checkbox"/> Notification - Explain below. <input type="checkbox"/> Other - Explain below.				
Explanation: Use additional page(s) if necessary. (For Section I and Section II.) Notification to add the Alternate Brand Name - Meto Star. This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.				
Section - III				
1. Material This Product Will Be Packaged In:				
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes" No. per Unit Packaging wgt. container	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes" No. per Package wgt container	2. Type of Container <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) HDPE lined bags	
* Certification must be submitted				
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1 gal., 2.5 gal., 5 gal.		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompany product
6. Manner in Which Label is Affixed to Product <div style="display: flex; justify-content: space-around;"> <div> <input type="checkbox"/> Lithograph <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled </div> <div> <input type="checkbox"/> Other _____ adhesive backed label _____ </div> </div>				
Section - IV				
1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)				
Name Kt Woodall		Title Agent for Sharda USA LLC		Telephone No. (Include Area Code) (302) 635-7289 (ktwoodall@vagnerreg.com)
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.				6. Date Application Received <div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto;"></div> (Stamped)
2. Signature 		3. Title Agent for Sharda USA LLC		
4. Typed Name Kt Woodall		5. Date September 6th, 2016		



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

December 5, 2016

Kt Woodall
Agent
Sharda USA LLC
c/o Wagner Regulatory Associates, Inc
P.O. Box 640
Hockessin, DE 19707

Subject: CSF Amendment – Revising Basic CSF
Product Name: SHARDA METOLACHLOR 86.4EC
EPA Registration Number: 83529-56
Application Date: August 5, 2016
Decision Number: 520946

Dear Ms. Woodall:

The Confidential Statement of Formula (CSF) referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

Please note that the record for this product currently contains the following CSFs:

- Basic CSF dated 12/05/2016

Any CSFs other than those listed above are superseded/no longer valid. If you have any questions, please contact Grant Rowland by phone at 703-347-0254, or via email at rowland.grant@epa.gov.

Sincerely,

A handwritten signature in black ink that reads "Kathryn V. Montague".

Kathryn Montague, Product Manager 23
Herbicide Branch
Registration Division (7505P)
Office of Pesticide Programs

E-Submission

August 5, 2016

Document Processing Desk (Amend)
ATTN: Kathryn Montague, PM 23
Registration Division
U.S. Environmental Protection Agency
Office of Pesticide Programs (7505P)
Room S-4900, One Potomac Yard
2777 South Crystal Drive
Arlington, Virginia 22202-4501



Dear Ms. Montague:

Subject: Sharda Metolachlor 86.4EC - EPA Reg. No. 83529-56, Amendment to revise Basic CSF

Wagner Regulatory Associates, Inc., as agent for Sharda USA LLC, respectfully submits the enclosed confidential statement of formula (CSF) amendment.

This amendment is submitted [REDACTED] [REDACTED] [REDACTED]. We have added this technical as the source of the active ingredient to the draft Basic CSF. [REDACTED] of the inert ingredients were adjusted. It is not expected that these changes would have any impact on the product chemistry or acute toxicity data.

In support of this amendment, the following documents are attached:

- Letter from Sharda USA LLC appointing Wagner Regulatory Associates, Inc. as its agent
- Application for Pesticide Registration (8570-1)
- Confidential Statement of Formula (8570-4)
- Formulators Exemption (8570-27)

If you have any questions about this submission, please contact the undersigned at anna@wagnerreg.com or (302) 510-0039.

Respectfully submitted,

Anna Armstrong
Agent for Sharda USA LLC

DOCUMENTUM

Rowland, Grant

From: Rowland, Grant
Sent: Friday, December 02, 2016 2:23 PM
To: 'Kt Woodall'
Subject: EPA reg# 83529-56 csf amendment

Kt.

On another note regarding EPA reg 83529-56. You submitted a CSF amendment alternating the Basic CSF (9/5/2016). Unfortunately you did not list the accurate amounts in Box 13a.

As currently listed your product does not add up to [REDACTED]. I do not think rejecting this would be worth the trouble for either of us, so if you could just rework a new CSF and get all the amounts of ingredients accurate, resubmit that CSF to me in any way you feel comfortable and I can go ahead and continue processing this action.

If you have any questions, please feel free to contact me. Thank you

-Grant

*Grant Rowland
Herbicide Branch
Registration Division
Office of Pesticide Programs
703-347-0254*

This is a reproduction of EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

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PROCESSING REQUEST

Reg # 83529-LA

Decision # 514573

Description: New Product

Electronic Label & Letter
(see PPLS):

OR

Non Electronic
Label & Letter
(Scanning required):

☒ Dated: 7/19/16

☐ Dated:

Only one label type should be selected

Other Materials Sent (see jacket):

☒ New CSF(s) Dated: Basic - 2/29/2016

☐ Other:

File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.

Reviewer: Karen Sameh

Division: RD/HB

Phone: (703) 347-8825

Date: 7/20/16



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:

☒ Registration
☐ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:

83529-56

Date of Issuance:

07/19/2016

Term of Issuance:

Conditional

Name of Pesticide Product:

Sharda Metolachlor 86.4EC

Name and Address of Registrant (include ZIP Code):

Ms. Cheryl Wagner
Sharda USA LLC
c/o Wagner Regulatory Associates, Inc.
P.O. Box 640
Hockessin, DE 19707

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Kathryn Montague, Product Manager 23
Herbicide Branch
Registration Division (7505P)
Office of Pesticide Programs

Date:

07/19/2016

2. You are required to comply with the data requirements described in the DCI identified below:

a. Metolachlor GDCI-108801-1506

You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI listed above, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: <http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1>

3. Make the following label changes before you release the product for shipment:

- Revise the EPA Registration Number to read, "EPA Reg. No. 83529-56."

4. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 02/29/2016

If you have any questions, please contact Karen Samek by phone at (703) 347-8825, or via email at samek.karen@epa.gov.

Enclosure

Group	15	Herbicide
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Sharda Metolachlor 86.4EC

Herbicide for use in cotton, peanuts, pod crops, potatoes, safflower, grain
or forage sorghum, soybeans and tomatoes

ACTIVE INGREDIENT: Metolachlor: 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl) acetamide..... **WT. BY %** 86.4%
OTHER INGREDIENTS: 13.6%
TOTAL: 100.00%
Contains 8.0 lbs. of active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand this label, find someone to explain it to you in detail.)

FIRST AID	
IF INHALED:	<ul style="list-style-type: none">• Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.• Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.
IF IN EYES:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for further treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice.• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to by a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. In case of an emergency involving this product, call CHEMTREC at 1-800-424-9300.	

Physical and Chemical Hazard: Do not mix or allow coming in contact with oxidizing agents.

[See inside booklet for complete [additional] [First Aid,] Precautionary Statements, and Directions For Use.]

EPA Reg. No. 83529-XX

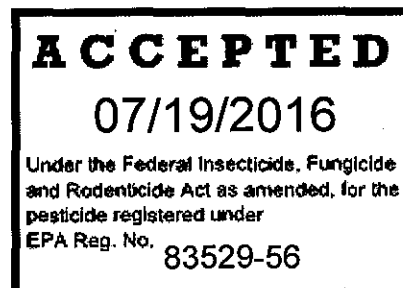
EPA Est. No. XXXXX-XX-XXX

Manufactured for:

Sharda USA LLC 

7217 Lancaster Pike, Suite A
Hockessin, Delaware 19707

Net Contents: _____



PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if inhaled, absorbed through skin or swallowed. Causes eye irritation. Avoid breathing vapor spray mist. Avoid contact with skin, eyes or clothing. This product may cause skin sensitization reactions in some people.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below.

Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves, such as barrier laminate, butyl rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, or nitrile rubber ≥ 14 mils, polyethylene, PVC ≥ 14 mils, or Viton ≥ 14 mils
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROL STATEMENTS

Mixers and loaders supporting aerial applications are required to use closed systems. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4)). When using this closed system, the mixers and loaders PPE requirements may be reduced or modified as specified in the WPS.

When handlers used closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. DO NOT contaminate water when disposing of equipment washwaters or rinsate.

Groundwater Advisory

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Surface Water Advisory

Metolachlor can contaminate surface water through ground spray drift. Under some conditions, metolachlor may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several months post application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

Mixing/Loading Instructions

DO NOT allow **Sharda Metolachlor 86.4EC** to back-siphon into wells, spill, or improper disposal of excess pesticide, spray mixtures, or rinsates.

Check valves or anti-siphoning devices must be used on all mixing and/or irrigation equipment.

Do not mix or load **Sharda Metolachlor 86.4EC** within 50 feet of perennial or intermittent streams and rivers, natural or impounded lakes, and reservoirs. Do not mix or load **Sharda Metolachlor 86.4EC** within 50 feet of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of **Sharda Metolachlor 86.4EC** into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash-water, and rain water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means that the pad must be self-contained. The pad must be sloped to facilitate material removal.

unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. This labeling must be in the possession of the user at the time of pesticide application.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **24 hours**.

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves such as barrier laminate, butyl rubber ≥ 14 mils, or nitrile rubber ≥ 14 mils, or neoprene rubber ≥ 14 mils, polyethylene, PVC ≥ 14 mils, or Viton ≥ 14 mils
- Shoes plus socks

Failure to follow the Directions for Use, Restrictions, and Precautions in this label can result in poor weed control, crop injury, and/or illegal residues.

Not for sale, use, or distribution in Nassau or Suffolk counties in New York. Aerial application in New York state is prohibited.

Do not apply **Sharda Metolachlor 86.4EC** in windy conditions. Do not allow spray to overlap as crop injury can occur.

PRODUCT INFORMATION

Observe all precautions and limitations on the labels of each state-registered product used in tank mixtures. Tank mixtures are permitted only in states where the tank mix partner product is registered.

FOR ALL TANK MIXTURES: It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Sharda Metolachlor 86.4EC is a selective herbicide that can be used pre-plant surface-applied, pre-plant incorporated, or pre-emergence treatment in water or liquid fertilizer to control listed annual grasses and broadleaf weeds in cotton, peanuts, pod crops, potatoes, safflower, grain/forage sorghum, soybeans and tomatoes. Post-emergence applications of **Sharda Metolachlor 86.4EC** can be made on soybeans.

RESISTANCE MANAGEMENT

Sharda Metolachlor 86.4EC is a Group 15 herbicide. Weed populations may contain or develop plants that become naturally resistant to metolachlor and/or other Group 15 herbicide products. If Group 15 herbicides are used repeatedly in the same field or in successive years as the primary method of control of targeted species, weed species that have developed resistance to Group 15 herbicides can dominate the weed population, resulting in partial or total loss of weed control.

To avoid herbicide resistance:

- Do not use **Sharda Metolachlor 86.4EC** consecutively with other Group 15 herbicides that have similar modes of action on targeted weed.
- Use tank mixtures and premixes from different Groups provided that the products involved are registered for the same use, have different modes of action, and/or are effective at the tank mix or prepack rate on the weed(s) concerned.

- Utilize a comprehensive Integrated Pest Management (IPM) program.
- Monitor treated areas for loss of field efficacy.
- Contact your local state extension specialist, certified crop advisors, and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

APPLICATION INSTRUCTIONS

SOIL TEXTURES AND APPLICATION RATES

Where rates are based on soil texture, classes are categorized as follows:

Coarse-Textured	Medium-Textured	Fine-Textured
Sand, Loamy sand, Sandy loam	Loam, Silt loam, Silt	Sandy clay loam, Silty clay loam, Clay loam, Sandy clay, Silty loam, Silty clay, Clay

Coarse-Textured/Low Organic Matter Soils: Use the lower rate within the specified rate range.

Fine-Textured/High Organic Matter Soils: Use the higher rate within the specified rate range.

APPLICATION METHODS

Apply **Sharda Metolachlor 86.4EC** pre-emergence alone, or in combination with specified tank mix partners following pre-plant incorporated herbicides when used according to label instructions and such use is not prohibited on the respective labels.

Thoroughly clean sprayer/application device before applying **Sharda Metolachlor 86.4EC**. Dispose of cleaning solution in a responsible manner. Do not use a sprayer or applicator contaminated with any other materials to avoid crop damage and/or clogging of the application device.

MIXING INSTRUCTIONS

Mix **Sharda Metolachlor 86.4EC** alone with water or liquid fertilizer and apply as a spray:

- Fill the spray tank $\frac{1}{2}$ - $\frac{3}{4}$ full of water or liquid fertilizer.
- Add the specified amount of **Sharda Metolachlor 86.4EC**.
- Add the remaining water or liquid fertilizer.
- Maintain sufficient agitation during mixing and application to maintain a uniform emulsion.

TANK MIX APPLICATIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Tank Mixtures:

- Fill the spray tank $\frac{1}{4}$ full with water, and begin agitation.
- Add 2,4-D, AAtrex®, Balan®, Banvel, Basagran®, Butoxone®, Butyrac®, Canopy®, Caparol 4L®, Command®, Cotoran®, Eptam®, Gemini®, Lexone®, Lorox®, Lorox Plus, Marksman®, MSMA, Preview®, Princep®, Prowl®, Pursuit®, AAtrex + Princep, Scepter®, Sencor®, Sonalan®, Starfire®, or Treflan® ensuring products disperse.
- Add **Sharda Metolachlor 86.4EC**.
- Add Gramoxone® Extra, Landmaster® BW, or Roundup® if these products are being used.
- Add the rest of the water.

For tank mixtures with AAtrex, Banvel, Canopy, Caparol 4L, Command, Cotoran®, Eptam, Gemini, Lexone, Lorox, Lorox Plus, Marksman, Preview, Princep, Prowl®, Pursuit, AAtrex + Princep, Scepter, Sencor, Sonalan, Starfire, or Treflan, liquid fertilizers can replace all or part of the water as carrier, except for AAtrex post-emergence and Banvel post-emergence tank mixes. For tank mixtures with AAtrex, refer to the AAtrex label for additional mixing instructions. For each mixture, check compatibility with liquid fertilizers before mixing in spray tank. For all tank mixtures, agitate during mixing and application to maintain a uniform suspension.

*See **Special Mixing Instructions** for tank mixtures with Cotoran, and with AAtrex or Princep + Prowl under the appropriate tank mixture section.

Compatibility Test

Because liquid fertilizers vary, even within the same analysis, always **check compatibility with herbicide(s) prior to use**. Serious compatibility issues are most likely to occur when mixing with complete suspension or liquid fertilizers. Commercial application equipment can improve compatibility. The following test assumes a spray volume of 25 gals./A. For other spray volumes, make appropriate changes in the ingredients. To check compatibility:

1. Add 1 pint of fertilizer to each of 2 one-quart jars with tight lids.
2. To **one** of the jars, add $\frac{1}{4}$ tsp. (1.2 milliliters) of a compatibility agent approved for this use such as Compex® or Unite® ($\frac{1}{4}$ tsp. is equivalent to 2 pts./100 gals. spray). Shake/stir gently to mix.
3. To **both** jars, add the appropriate amount of herbicide(s).

If more than one herbicide is used, add them separately in the following order:

- Dry herbicides first, flowables next, and emulsifiable concentrates last.
- After each addition, shake or stir gently to thoroughly mix.
- The appropriate amount of herbicides for this test is:

Dry Herbicides: For each pound to be applied per acre, add 1.5 level teaspoons to each jar.

Liquid Herbicides: For each pint to be applied per acre, add 0.5 teaspoon or 2.5 milliliters to each jar.

Note: For **Sharda Metolachlor 86.4EC** tank mixtures with AAtrex + Princep, use $\frac{1}{4}$ - $\frac{1}{2}$ the amount of AAtrex specified and the remainder as Princep, depending on whether the 1:2 or 1:1 ratio of AAtrex to Princep is to be applied.

4. After adding all ingredients, put lids on and tighten, and invert each jar 10 times to mix.

5. Let the mixtures stand 15 minutes.

6. After 15 minutes, check jars for chemical separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if a compatibility agent is needed in the spray mixture by comparing the 2 jars. If either mixture separates but can be remixed readily, the mixture can be sprayed as long as adequate agitation is maintained.

If the mixtures are incompatible, the following methods may improve compatibility:

- Slurry the dry herbicide(s) in water before adding, or
- Add $\frac{1}{4}$ of the compatibility agent to the fertilizer, and the other $\frac{1}{4}$ to the emulsifiable concentrate or flowable herbicide before adding to the mixture.

If incompatibility is still observed, do not use the mixture.

APPLICATION TIMING

Sharda Metolachlor 86.4EC alone or in some tank mixtures with other labeled herbicides may be applied for weed control in certain crops at various times. Refer to the given crop section of the label to determine if application timings listed below are specified.

Pre-Plant Surface Applications

45 days before planting: For minimum-tillage or no-tillage systems only, apply **Sharda Metolachlor 86.4EC** alone, or with **Sharda Metolachlor 86.4EC** tank mixtures.

30-45 days before planting: Make split applications, with $\frac{2}{3}$ the specified broadcast rate for the crop and soil texture applied initially and the remaining $\frac{1}{3}$ at planting.

Less than 30 days before planting: Make split applications or a single application.

Refer to individual crop to determine if early pre-plant surface application instructions are provided. If weeds are present at the time of treatment, apply in a tank mixture combination with a contact herbicide (for example, Gramoxone Extra or Roundup). Observe directions for use, precautions, and restrictions on the label of the contact herbicide. To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

a. Pre-Plant Incorporated: Apply **Sharda Metolachlor 86.4EC** to the soil and incorporate into the top 2 inches of soil within 14 days before planting, using a finishing disk, harrow, rolling cultivator, or similar implement capable of providing uniform 2-inch incorporation. Use a pre-plant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. If crop will be planted on beds, apply and incorporate **Sharda Metolachlor 86.4EC** after bed formation, unless specified otherwise.

b. Pre-Emergence: Apply **Sharda Metolachlor 86.4EC** during planting (behind the planter) or after planting but before weeds or crops emerge.

SPECIAL APPLICATION PROCEDURES

Pre-Plant Incorporated: CA Only (Safflower, Pod Crops): Make broadcast applications of **Sharda Metolachlor 86.4EC** to the soil and thoroughly incorporate with a disk or similar implement set to till 4-6 inches deep. For more thorough incorporation, till the soil in 2 different directions (cross-till). Crops may be planted on flat surface or on beds. Exercise caution when forming the beds that only soil from the **Sharda Metolachlor 86.4EC** treated area is used. Do not bring untreated soil to the surface. If applying to pre-formed beds, incorporate **Sharda Metolachlor 86.4EC** with a tillage implement set to till 2-4 inches deep. Ensure that **Sharda Metolachlor 86.4EC** treated soil remains in the beds.

Pre-Emergence Applications (CA only): Apply **Sharda Metolachlor 86.4EC** after planting and water by sprinkler or flood irrigation within 7-10 days.

Fall Applications in the states of Iowa, Minnesota, North Dakota, South Dakota, Wisconsin, North of Route 20 in Nebraska, North of Route 136 in Illinois: Apply **Sharda Metolachlor 86.4EC** on medium- and fine-textured soils with more than 2.5%

organic matter that will be planted to soybeans the following spring. The ground can be tilled before or after application. DO NOT apply to frozen ground. DO NOT exceed 2-3-inch incorporation depth if soil is tilled after treatment. If a spring application is made, the total rate of the fall application and the spring application combined must not exceed the maximum total rate for the specific crop or illegal residues can result.

Ground Application

Apply **Sharda Metolachlor 86.4EC** alone or in tank mixtures by ground equipment in a minimum of 10 gals. of spray mixture per acre unless otherwise specified.

Use sprayers that provide accurate and uniform application. For **Sharda Metolachlor 86.4EC** tank mixtures with wettable powder or dry flowable formulations, screens and strainers must not be finer than 50-mesh. Rinse sprayer thoroughly with clean water immediately after use.

Calculate the amount of herbicide needed for band treatment by the formula:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

Low Carrier Volumes: Broadcast Ground Application Only

Use sprayers, such as Ag-Chem RoGator®, Hagie, John Deere Hi-CycleT, Melroe Spra-Coupe, Tyler Patriot™, or Willmar Air Ride®, that provide accurate and uniform application. **Only water may be used as a carrier.** Screens in suction and in-line strainers must be 50-mesh. Manufacturers may require that tip screens as fine as 100-mesh be used with some nozzles. Use a pump with capacity to:

- maintain up to 35-40 psi at the nozzles
- provide sufficient agitation in tank to keep mixture in suspension.

Use a minimum of 5 gals. of spray mixture per acre. Maximum sprayer speed is 15 mph. Rinse sprayer thoroughly with clean water immediately after each use.

Note: Use low pressure nozzles to reduce drift and increase application accuracy. Exercise care when using automatic rate controlling devices to spray the material within the rated working pressure and flow ranges of the nozzles selected. Use nozzle screens used when specified by the manufacturer. Place nozzles on 20-inch centers, except flooding types which must be placed on 40-inch centers. When Flat Fan-type nozzles are used, use those with angles of 80° or 110°. Always read and follow the manufacturer's directions for optimum setup and performance of their nozzles or tips.

AERIAL APPLICATION

Apply **Sharda Metolachlor 86.4EC** with properly calibrated aerial equipment in 5 or more gallons of spray mixture per acre. Do not apply under conditions where uniform coverage cannot be obtained, or when excessive spray drift may occur. To avoid injury to sensitive crops from drift, aerial applications must adhere to the following **AERIAL USE DIRECTIONS, RESTRICTIONS AND PRECAUTIONS:**

- Nozzle height above the ground must be a maximum of 10 feet above the crop with low drift nozzles at a maximum pressure of 40 psi.
- Nozzles must be pointed toward the rear of the aircraft. The downward angle of the nozzle must not exceed 45 degrees.
- Nozzles and/or spray boom must not be located any closer to the end of the wing or rotor than $\frac{1}{4}$ the distance from the center of the aircraft.
- Use a maximum spray pressure of 40 psi.
- Establish a buffer zone between the area to be sprayed and sensitive crops.
- DO NOT spray when wind velocity is great than 5 mph.

The applicator is responsible for any loss or damage resulting from the application of **Sharda Metolachlor 86.4EC** in any manner not listed on this label. The applicator is responsible for following all state and local regulations and ordinances relative to spraying **Sharda Metolachlor 86.4EC**.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

Ground Applications: Apply using a nozzle height no more than 4 feet above the ground or crop canopy.

Aerial Applications: Product efficacy is reduced if the distance of the outermost nozzles on the boom exceed $\frac{1}{4}$ the length of the wingspan or rotor. Nozzles must point backward parallel with the air stream and must not be pointed downward more than 45 degrees.

Where states have more stringent regulations, they must be observed.

The applicator must be familiar with and account for the information provided in the **SPRAY DRIFT MANAGEMENT** section of this label.

IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets greater than 150-200 microns. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see **Wind, Temperature and Humidity, and Temperature Inversion sections**).

CONTROLLING DROPLET SIZE

- **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** – Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** – Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** – Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

BOOM LENGTH

For some use patterns, reducing the effective boom length to less than $\frac{1}{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.

APPLICATION HEIGHT

Do not make applications at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

WIND

Drift potential is lowest between wind speeds of 2 – 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS

Do not apply during a temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small-suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

SENSITIVE AREAS

Sharda Metolachlor 86.4EC must only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas). Do not apply near humans or animals. Flagmen and loaders must avoid inhalation of spray mist and prolonged contact with skin.

APPLICATION WITH IMPREGNATED DRY BULK GRANULAR FERTILIZERS

Sharda Metolachlor 86.4EC may be impregnated or coated on many dry bulk granular fertilizers and applied with the fertilizers to control weeds. Follow all directions for use restrictions and precautions on the **Sharda Metolachlor 86.4EC** label regarding target crops, rates per acre, soil texture, application methods, and rotational crops.

It is the responsibility of the individual and/or company selling the herbicide/fertilizer mixture to comply with all individual state regulations relating to dry bulk granular fertilizer blending, registration, labeling, and application.

Prepare the herbicide/fertilizer mixture by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender. Space nozzles used to spray **Sharda Metolachlor 86.4EC** onto the fertilizer to provide uniform spray coverage. Aim the spray onto the fertilizer only, avoiding the walls of the blender.

If the herbicide/fertilizer mixture is too wet, add a highly absorptive material, such as Agsorb® FG or Celatom MP-79®, or similar granular clay or diatomaceous earth materials, to obtain a dry, free-flowing mixture. Add absorptive materials only after the herbicide has been thoroughly blended into the fertilizer mixture. Best application results are obtained when a granule of 6/30 particle size or of a size similar to that of the fertilizer materials is used. Use less than 2% by weight of absorptive material. Do not use more than 5% absorptive material by weight.

Calculate the amount of **Sharda Metolachlor 86.4EC** to be used per ton of fertilizer by using the following formula:

$$2,000 / \text{pounds of fertilizer desired per acre} \times \text{number of pints Sharda Metolachlor 86.4EC required per acre} = \text{pints of Sharda Metolachlor 86.4EC per ton of fertilizer.}$$

Application by Pneumatic (Compressed Air) Equipment: High humidity, high urea concentrations, low fertilizer use rates, and dusty fertilizer can cause fertilizer mixtures to build up and/or plug the distributor head, air tubes, or nozzle deflector plates. To minimize buildup, premix 2.0-2.5 pints/gallon **Sharda Metolachlor 86.4EC** and ExxonMobil™ Aromatic 200. Aromatic 200 is a noncombustible, nonflammable petroleum product that can be used in either a fertilizer blender or through direct injection systems. Do not use drying agents when using Aromatic 200.

If impregnating **Sharda Metolachlor 86.4EC** in a blender before application, substitute a drying agent for Aromatic 200 for a drier mixture. Add Agsorb® FG or another drying agent of 6/30 particle size. Do not use drying agents with On-The-Go impregnation equipment.

Precautions: Use mixtures of **Sharda Metolachlor 86.4EC** and Aromatic 200 on dry fertilizer only. Poor results or crop injury can occur if these mixtures are used in water or liquid fertilizer solutions for spraying applications.

Restrictions:

To avoid potential for explosion:

- DO NOT impregnate **Sharda Metolachlor 86.4EC** on ammonium nitrate, potassium nitrate, or sodium nitrate, either alone or in blends with other fertilizers.
- DO NOT combine **Sharda Metolachlor 86.4EC** with a single superphosphate (1-20-0) or treble superphosphate (0-46-0).
- DO NOT use **Sharda Metolachlor 86.4EC** on straight limestone as absorption will not occur.
- Fertilizer blends containing limestone can be impregnated.

Application of Impregnated Dry Bulk Granular Fertilizer

Apply 200 to 700 pounds of the herbicide/fertilizer mixture per acre. Apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential in order to prevent possible crop injury to subsequent rotational crops. Non-uniform application results in unsatisfactory weed control. In areas where conventional tillage is practiced, incorporate the mixture shallowly into the soil. On fine- or medium-textured soils in areas where soil incorporation is not planned, i.e., reduced-tillage situations or in some conventional till situations, apply **Sharda Metolachlor 86.4EC** approximately 30 days before planting to allow moisture to move the herbicide/fertilizer mixture into the soil. On coarse-textured soils, apply **Sharda Metolachlor 86.4EC** approximately 14 days prior to planting.

Application Precaution: Apply **Sharda Metolachlor 86.4EC** as early as possible to avoid rotational crop injury, since **Sharda Metolachlor 86.4EC** impregnated onto dry bulk fertilizers lasts longer in the soil than if it is applied as a spray in water or fluid fertilizer.

CHEMIGATION - CENTER PIVOT IRRIGATION

Sharda Metolachlor 86.4EC alone or in tank mixture with other herbicides on this label that are registered for center pivot application can be applied in irrigation water pre-emergence (after planting but before weeds or crop emerge) at specified rates listed on this label. Apply this product only through a center pivot irrigation system.

Do not apply this product through any other type of irrigation system.

Crop injury, reduced efficacy, and/or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact State Extension specialists, equipment manufacturers, or other experts. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Restriction: Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

Operating Instructions

1. The system must contain a functional check-valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from back flow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump or piston pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. Prepare a mixture with a minimum of 1 part of water to 1 part herbicide(s) and inject this mixture into the center pivot system. Injecting a larger volume of a more dilute mixture per hour will usually provide more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension.
9. Meter into irrigation water during entire period of water application.
10. Apply in $\frac{1}{2}$ -1 inch of water. Use the lower water volume ($\frac{1}{2}$ inch) on coarse-textured soils and the higher volume (1 inch) on fine-textured soils. More than 1 inch of water at application may reduce weed control by moving the herbicide below the effective zone in the soil.

Precaution For Center Pivot Applications: Where sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control can occur. Where sprinkler distribution patterns overlap excessively, crop injury can occur.

Note: For information on applying in lower volumes of carrier, see **Low Carrier Application** section of this label.

CLEANING INSTRUCTIONS

- Do not use the same sprayer without thoroughly cleaning on sensitive crops; minute residues of **Sharda Metolachlor 86.4EC** in the tank can injure crops.
- Wash sprayer and spray equipment thoroughly with clean water immediately after use.
- Drain any remaining spray solution of **Sharda Metolachlor 86.4EC** from the spray tank and dispose of according to label disposal instructions.
- Rinse the spray tank and refill with water, adding 1 cup heavy-duty detergent per 20 gallons of water.
- Recycle this mixture through the equipment for 5 minutes, and spray out.
- Clean pump and nozzle screens thoroughly.
- Wash away any spray mixture from the outside of spray tank, nozzles or spray rig.
- Dispose of all rinse water in compliance with local, state, and Federal guidelines.

USE PRECAUTIONS

Where directions specify a **Sharda Metolachlor 86.4EC** tank mixture with AAtrex formulations, other brands of atrazine may be used. Follow the rates, instructions, and limitations on the AAtrex or respective atrazine product label if other brands of atrazine are used. Injury may occur following the use of **Sharda Metolachlor 86.4EC** under abnormally high soil moisture conditions during early development of the crop.

USE RESTRICTIONS

- Do not use in nurseries, turf, or landscape plantings.
- Do not apply under conditions which favor runoff or wind erosion of soil containing this product to non-target areas.
- Do not apply to impervious substrates such as paved or highly compacted surfaces.
- Do not use tail-water from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least $\frac{1}{2}$ inch of rainfall has occurred between application and the first irrigation.
- If **Sharda Metolachlor 86.4EC** is incorporated, any supplemental tillage before planting must not exceed the depth of incorporation.

Note: Certain states may have established rate limitations for atrazine within specific geographical areas. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.

Dry weather following pre-emergence application of **Sharda Metolachlor 86.4EC** or a tank mixture can reduce product efficacy.

Cultivate if weeds develop. Where reference is made to weeds partially controlled, partial control can either mean erratic control from good to poor or consistent control at a level below that generally considered acceptable for commercial weed control.

Sharda Metolachlor 86.4EC applied alone controls or partially controls the following weeds:

Barnyardgrass (watergrass)	Foxtail millet	Shattercane
Bristly foxtail	Galinsoga	Signalgrass (<i>Brachiaria</i>)
Carpetweed	Giant foxtail	Southwestern cupgrass
Common purslane	Goosegrass	Tall waterhemp
Common waterhemp	Green foxtail	Texas panicum
Crabgrass	Hairy nightshade	Volunteer sorghum
Crowfootgrass	Pigweed	Wild proso millet
Eastern black nightshade	Prairie cupgrass	Witchgrass
Eclipta	Red rice	Woolly cupgrass
Fall panicum	Robust foxtails (purple, white)	Yellow foxtail
Florida beggarweed	Sandbur	Yellow nutsedge
Florida pusley	Seedling johnsongrass	

Partial control. Refer to the **product information** section. Weed control is erratic due partially to variable weather conditions.

**** Florida Beggarweed:** Apply a minimum of 2 pints/acre pre-emergence for partial control.

Texas Panicum: Apply a minimum of 2 pints/acre using a center pivot irrigation system.

To improve weed control:

1. Till moist soil thoroughly to destroy germinating and emerged weeds. If **Sharda Metolachlor 86.4EC** is applied pre-plant incorporated, tillage may be used to incorporate **Sharda Metolachlor 86.4EC** if uniform 2-inch incorporation is achieved as specified in **Application Procedures**.
2. Plant crop into moist soil immediately after tillage. If **Sharda Metolachlor 86.4EC** is to be used pre-emergence, apply at planting or immediately after planting.
3. Irrigate ½ - 1 inch of water with a sprinkler system, if available, within 2 days of application. Irrigate with ½ inch water volume on coarse-textured soils, and 1 inch on fine-textured soils. Refer to the section on **Center Pivot Irrigation Application** for instructions with this application method.
4. If irrigation is impossible and rain does not occur within 2 days after planting and application, weed control may be decreased. Under these conditions, perform a shallow cultivation as soon as weeds emerge.

Rotational Crops:

Sharda Metolachlor 86.4EC Alone:

(1) If a crop treated with **Sharda Metolachlor 86.4EC** alone is lost, any crop on this label may be replanted immediately. Do not make a second broadcast application of **Sharda Metolachlor 86.4EC**. If the original application was banded and the second crop is planted in the untreated row middles, make a second banded treatment.

Crop	Rotation Interval (months)
Alfalfa	4 months
Barley, oats, rye, wheat	4 ½ months
Clover	9 months
Tomatoes	6 months
All other crops	12 months

(2) Any crop on this label, in addition to root crops, tobacco, barley, buckwheat, milo, oats, rice, rye, wheat, cabbage, or peppers, may be planted in the spring following treatment.

(3) Following a lay-by treatment or multiple treatments applied the previous season, any crop on this label, in addition to tobacco, cabbage, or peppers, may be planted in the spring.

Restrictions:

- Do not make a second broadcast application of **Sharda Metolachlor 86.4EC**.
- Do not graze or feed forage or fodder from cotton to livestock.

Sharda Metolachlor 86.4EC Tank Mixtures: For **Rotational Crops** restrictions for **Sharda Metolachlor 86.4EC** used in tank mixtures, refer to the statements/restrictions above for **Sharda Metolachlor 86.4EC** and to the respective product labels of any mixing partner(s) for additional statements/restrictions.

CROPS

COTTON

Sharda Metolachlor 86.4EC ALONE

Application: Apply Sharda Metolachlor 86.4EC pre-emergence only in AR, LA, MS, TN, and Bootheel of MO.

Sandy loam: Apply 0.75-1.0 pts./A.

Medium & Fine soils: Apply 1.0-1.33 pts./A.

Apply Sharda Metolachlor 86.4EC pre-plant incorporated or pre-emergence in NM, OK, and TX.

Sandy loam: Apply 1.0 pts./A.

Medium soils: 1.0-1.33 pts./A.

Fine soils: 1.33 pts./A.

Apply 0.75-1.33 pts./A Sharda Metolachlor 86.4EC post-emergence to cotton and pre-emergence to weeds according to the state rate limitations in the **Post-emergence** section.

Restriction: Do not use on sand and loamy sand.

Pre-Plant Incorporated (NM, OK, and TX Only):

Apply to the soil and incorporate into the top inch of soil immediately before planting, at planting, or after planting but before crop or weeds emerge. Use a rolling cultivator or similar implement to uniformly incorporate not more than 1 inch deep. Use a pre-plant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. Wet the top of the bed where furrow irrigation is used. If the crop is to be planted on beds, apply and incorporate after bed formation. Plant cotton below the zone of incorporation; i.e., at least 1 inch on fine soils and 1.5 inches on coarse and medium soils. If incorporated prior to planting, use a planter that will result in a minimum of soil disturbance.

Note: For optimal control of yellow nutsedge and suppression of seedling johnsongrass, apply Sharda Metolachlor 86.4EC. Pre-plant incorporated at the maximum rate within the specified rate range for the soil texture, whether applied alone or mixed with Caparol 4L.

Pre-Emergence: Apply to the soil surface at planting or after planting but before weeds or crop emerge.

Post-Emergence: Apply Sharda Metolachlor 86.4EC broadcast over-the-top or directed to the soil surface, according to the rate and cotton height limitations listed below by state. Application before weeds emerge or after clean cultivation to remove existing weeds is necessary since Sharda Metolachlor 86.4EC will not control emerged weeds. Sharda Metolachlor 86.4EC post-emergence may be applied over any previous registered herbicide treatment. In sprinkler-irrigated areas, sprinkler-irrigate after application with ½-1 inch of water (½ inch on coarse-textured soils to 1 inch on fine-textured soils) to incorporate Sharda Metolachlor 86.4EC. In furrow-irrigated areas, apply Sharda Metolachlor 86.4EC, incorporate with a rolling cultivator or similar implement that provides uniform shallow incorporation (2 inches or less), and then irrigate. In non-irrigated areas, if at least ½ inch of rainfall does not occur within 10 days after application, cultivate with a rolling cultivator or similar implement that provides uniform shallow incorporation of Sharda Metolachlor 86.4EC.

State Specific Restrictions:

VA, NC, SC, GA, FL, and AL: Apply 1.0-1.33 pts./A Sharda Metolachlor 86.4EC when cotton is 3-6" tall.

TN, AR, MS, MO, and LA: Apply 0.75-1.33 pts./A Sharda Metolachlor 86.4EC when cotton is 3-12" tall.

TX, OK, NM, AZ, CA, and Clay Soils in AR: Apply 1.0-1.33 pts./A Sharda Metolachlor 86.4EC when cotton is 3-12" tall but before August 1st.

Multiple Applications:

If weed pressure is heavy, difficult to control species are present and/or expected, or reinfestation occurs, and a weed control program is used, multiple applications of Sharda Metolachlor 86.4EC are effective when used as part of the weed control program. Apply as a pre-plant incorporated or pre-emergence treatment and follow with an application post-emergence to cotton before weeds emerge or after clean cultivation to remove existing weeds, since Sharda Metolachlor 86.4EC will not control emerged weeds. Cotton must be at least 3" tall at the post-emergence timing. Apply Sharda Metolachlor 86.4EC post-emergence over a previous pre-plant or pre-emergence Sharda Metolachlor 86.4EC application as shown in the following table.

State	Multiple Sharda Metolachlor 86.4EC Applications to Cotton		
	Pre-Plant Incorporated or Pre-Emergence Pts./A	+	Post-Emergence and Height Pts./A
MS, LA, TN, AR, MO	0.75 – 1.33 (Pre-Emergence only)		0.75 – 1.33 to 3-12" Cotton
TX, OK, NM	1.0 – 1.33		1.0 – 1.33 to 3-12" Cotton before Aug. 1 st
NC & VA	1.0 – 1.33 (Pre-Emergence only)		1.0 – 1.33 to 3-12" Cotton

In sprinkler-irrigated areas, sprinkler irrigate after application with ½ -1" of water (½" on coarse textured soils to 1" on fine-textured soils) to incorporate **Sharda Metolachlor 86.4EC**. In furrow-irrigated areas, apply **Sharda Metolachlor 86.4EC**, incorporate with a rolling cultivator or similar implement that provides uniform shallow incorporation (2" or less), and then irrigate. In non-irrigated areas, if at least ½" rainfall does not occur within 10 days after application, cultivate with a rolling cultivator or similar implement that provides uniform shallow incorporation of **Sharda Metolachlor 86.4EC**.

Note: For best control of yellow nutsedge and suppression of seedling johnsongrass, apply **Sharda Metolachlor 86.4EC** pre-plant incorporated, pre-emergence, or post-emergence to cotton and pre-emergence to weeds at the maximum rate within the specified rate range for the soil texture, whether applied alone or in combinations. Do not apply more than a total of 2.0 pts./A on coarse soils or 4 pts./A of **Sharda Metolachlor 86.4EC** on medium and fine soils during a growing season. These treatments may be applied over previous registered herbicide treatments.

Restrictions:

- Do not apply **Sharda Metolachlor 86.4EC** on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed.
- Do not make broadcast applications of **Sharda Metolachlor 86.4EC** to cotton planted in furrows more than 2 inches deep. Make band applications to cotton planted in furrows deeper than 2 inches, but band width must not exceed the width of the bottom of the furrow.
- Do not apply **Sharda Metolachlor 86.4EC** post-emergence until after first "knifing" or cultivation to level soil surface.
- Do not apply over-the-top in fluid fertilizer or any other adjuvant, surfactant, oil, or other pesticide not listed in the cotton section of this label.
- Do not graze or feed forage or fodder from cotton to livestock.
- Do not apply on Taloka silt loam.
- Do not use in Gaines County, TX.

Sharda Metolachlor 86.4EC COMBINATIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Tank Mixture with Caparol 4L

Apply **Sharda Metolachlor 86.4EC** tank mixtures with Caparol 4L pre-plant incorporated or pre-emergence in water or fluid fertilizer. When fluid fertilizer is used as a carrier for **Sharda Metolachlor 86.4EC**, either alone or in combination with Caparol 4L, mix only the amount that will be sprayed in one operation. Do not allow mixtures to stand without agitation. Only water may be used as a carrier for post-emergence directed application.

In addition to those weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC** + Caparol 4L, applied pre-plant incorporated or pre-emergence, controls the following weeds:

Annual morningglory	Junglerice	Mustard	Ragweed
Groundcherry	Lambsquarters	Prickly sida (teaweed)	Shallow-germinating seeds
Hairy night shade	Malva	Purslane	of cocklebur & coffeeweed
			Wild oats

As a post-emergence directed application, Caparol provides post-emergence control and residual control of weeds on its label, while **Sharda Metolachlor 86.4EC** provides residual control of weed species on its label. **Sharda Metolachlor 86.4EC** will not control emerged weeds.

Pre-Plant Incorporated or Pre-Emergence:

Apply **Sharda Metolachlor 86.4EC** + Caparol 4L, either pre-plant incorporated or pre-emergence, using the appropriate rate from the **Sharda Metolachlor 86.4EC** + Caparol 4L – Cotton (NM, OK, TX) table. Plant cotton below the zone of incorporation; i.e., at least 1" on fine soils and 1½" on coarse and medium soils. If incorporated before planting, use a planter that will result in a minimum soil disturbance.

Sharda Metolachlor 86.4EC + Caparol 4L – Cotton (NM, OK, TX)

Do not use on sand, loamy sand soils.

USE AREAS	SOIL TEXTURE	BROADCAST RATES PER ACRE	
		Sharda Metolachlor 86.4EC	Caparol 4L
OK, and Blacklands and Gulf Coast of TX	Loams	0.85 - 1.33 pts.	2.4 pts.
	Clays	1.33 pts.	4.8 pts.
Rio Grande Valley of TX	Loams	0.85 - 1.33 pts.	3.2 pts.
	Clays	1.33 pts.	4.8 pts.
NM; High Plains, Rolling Plains, Edwards Plateau of TX; and Southwest TX	Sandy loam	0.85 - 1.0 pt.	1.6 pts.
	Loams	0.85 - 1.33 pts.	2.4 pts.
	Sandy clay loam	1.33 pts.	2.4 pts.
	Other clay soils	1.33 pts.	3.2 pts.

Post-Emergence-Directed (AR, AZ, CA, LA, MS, NM, OK, TN, TX, and MO): Tank mix **Sharda Metolachlor 86.4EC** with Caparol 4L in water and apply post-emergence in cotton to control emerged weeds listed on the Caparol 4L label and residual pre-emergence control of weeds controlled by **Sharda Metolachlor 86.4EC** and Caparol 4L or apply after cultivation for residual pre-emergence control. These treatments may be applied over previous registered treatments, including **Sharda Metolachlor 86.4EC**; however, the maximum label rate of any product must not be exceeded. **Do not apply over-the-top of cotton.**

Apply **Sharda Metolachlor 86.4EC** + Caparol 4L in a minimum of 20 gals. of spray volume per acre. Follow the directions, limitations, restrictions and precautions on the Caparol 4L label when Caparol is applied as a post-emergence directed application. Refer to the directions, limitations, and precautions for use of **Sharda Metolachlor 86.4EC** under the **Cotton-Sharda Metolachlor 86.4EC Alone-Post-Emergence** section.

Restrictions:

- Do not make broadcast applications of **Sharda Metolachlor 86.4EC** + Caparol 4L to cotton planted in furrows deeper than 2". Make band applications to cotton planted in furrows deeper than 2", but band width must not exceed the width of the bottom of the furrow.
- Do not apply on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed.
- Do not graze or feed forage or fodder from cotton to livestock.
- Do not apply to glandless cotton varieties.
- Do not apply on Taloka silt loam.
- Do not use in Gaines County, TX.
- Do not apply in cut areas of newly leveled fields, or in areas of excess salt.
- Refer to the Caparol 4L label for further instructions and limitations.

Tank Mixture with Cotoran DF

Tank mix **Sharda Metolachlor 86.4EC** + Cotoran DF pre-emergence to control weeds controlled by **Sharda Metolachlor 86.4EC** alone, and those as listed on the Cotoran DF label. This combination control spotted spurge, hyssop spurge, nodding spurge, and prostrate spurge. Apply to the soil surface at planting or after planting but before weeds or crop emerge, using the appropriate rates from the **Sharda Metolachlor 86.4EC + Cotoran DF-Cotton** table. Apply the tank mixture post-emergence to cotton but pre-emergence to weeds, or apply post-emergence to both cotton and broadleaf weeds for control of weeds on the Cotoran label. Apply as a directed, semi-directed, or over-the-top spray. **Sharda Metolachlor 86.4EC** will not control emerged weeds but will provide pre-emergence control of species on its label.

Mixing Instructions: Incompatibility can occur when tank mixing **Sharda Metolachlor 86.4EC** with Cotoran DF. To avoid incompatibility:

- Fill the spray tank ¼ full with water or fluid fertilizer and start agitation.
- Add Cotoran DF and allow it to become dispersed.
- Add X-77 at 0.5% volume/volume final spray (4 pts./100 gals.).
- Add **Sharda Metolachlor 86.4EC**.
- Add the rest of the water or fluid fertilizer.
- Agitate during mixing and application to maintain a uniform suspension.

Restriction:

- Do not use fluid fertilizer as a carrier for post-emergence applications.

Sharda Metolachlor 86.4EC + Cotoran DF-Cotton

Do not use on sand, loamy sand soils.

USE AREAS	SOIL TEXTURE	BROADCAST RATES PER ACRE	
		Sharda Metolachlor 86.4EC	COTORAN DF*
AR, LA, MS, Bootheel of MO & TN	Sandy loam	0.75 - 1.0 pts.	1.2 lbs.
	Loam, silt, silt loam	1.0 - 1.33 pts.	1.2 - 1.9 lbs.
	Fine	1.0 - 1.33 pts.	1.9 - 2.4 lbs.
Eastern OK, Gulf Coast, Rio Grand Valley & Eastern TX	Sandy loam	0.85 - 1.0 pts.	1.2 lbs.
	Loam, silt, silt loam	1.0 - 1.33 pts.	1.2 - 1.9 lbs.
	Fine	1.33 pts.	1.9 - 2.4 lbs.

*When using Cotoran 4L, use equivalent rates. Multiply lbs. of Cotoran DF by 1.7 to get pts. of Cotoran 4L.

Post-Emergence: Apply this tank mixture post-emergence to cotton but pre-emergence to weeds or post-emergence to both cotton and weeds for control of weeds on the Cotoran label. Apply as a directed, semi-directed, or over-the-top spray. **Sharda Metolachlor 86.4EC** will not control emerged weeds but will provide pre-emergence control of species on its label. Apply when cotton is in the 3-12" stage. Where rate ranges are given for Cotoran DF, use the higher rate within the specified rate range when applying post-emergence to weeds that are 2" or less. These treatments may be applied over previous registered treatments, including **Sharda Metolachlor 86.4EC**, provided the maximum label rate of any product is not exceeded.

Restrictions:

- Do not apply **Sharda Metolachlor 86.4EC** + Cotoran on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed.
- Do not make broadcast applications of **Sharda Metolachlor 86.4EC** + Cotoran to cotton planted in furrows more than 2" deep. Band applications may be made to cotton planted in furrows deeper than 2 inches, but band width must not exceed the width of the bottom of the furrow.
- Do not use on Taloka silt loam.
- Do not feed treated forage or gin trash to livestock or graze treated areas.
- Do not use in Gaines County, TX.

Refer to the Cotoran labels for further instructions, restrictions, precautions, and limitations.

Tank Mixture of Sharda Metolachlor 86.4EC or Sharda Metolachlor 86.4EC + Cotoran with Gramoxone Extra or Roundup for Minimum-Tillage or No-Tillage Systems

In minimum-tillage or no-tillage systems where cotton is planted directly into a cover crop, stale seedbed, or previous crop residues, the contact herbicides Gramoxone Extra or Roundup may be added to a tank mix of either **Sharda Metolachlor 86.4EC** or **Sharda Metolachlor 86.4EC** + Cotoran. When used as directed, the Gramoxone Extra portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds. Roundup combinations will control emerged annual and perennial weeds when applied as directed on the Roundup label. The **Sharda Metolachlor 86.4EC** and **Sharda Metolachlor 86.4EC** + Cotoran portion of the tank mixture provides pre-emergence control of the weeds listed on this label in the **Sharda Metolachlor 86.4EC** and **Sharda Metolachlor 86.4EC** + Cotoran sections, respectively.

Refer to the label of each product used in combination and observe the planting details, information regarding application, geographical restrictions, and all other precautions and limitations. Refer to **Mixing Instructions** under the **Tank Mixture with Cotoran DF** section.

Application Instructions:

Apply before, during, or after planting, but before the cotton emerges. Apply 0.85-1.0 pts./A **Sharda Metolachlor 86.4EC** on sandy loams, medium-, and fine-textured soils. Refer to the **Sharda Metolachlor 86.4EC + Cotoran DF-Cotton** table for the Cotoran DF rates.

Add Gramoxone Extra or Roundup at the following broadcast rates:

Gramoxone Extra: 1.5-2.0, 2.0-2.5, or 2.5-3.0 pts./A to 1-3", 3-6", or 6" tall weeds, respectively.

Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50-74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6".

Restriction:

- Do not apply combinations containing Gramoxone Extra in suspension-type liquid fertilizers as the activity of paraquat will be reduced.

Roundup: See the Roundup label for weeds controlled, rates, and other use directions.

Heavy rains soon after application can result in crop injury, especially in poorly drained areas, where water stands for several days, or where the seeding slit has not been properly closed.

Restrictions:

- Do not apply **Sharda Metolachlor 86.4EC** + Cotoran 4L + Roundup in tank mixture because of compatibility problems.
- Do not use in Gaines County, TX.

Refer to the Cotoran labels and the **Tank Mixture with Cotoran DF** section of this label for further instructions, restrictions precautions, and limitations.

Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.

Tank Mixture with MSMA, MSMA + Caparol, or MSMA + Cotoran

Tank mix **Sharda Metolachlor 86.4EC** with MSMA in water and apply post-emergence control of emerged weeds listed on the MSMA product label and residual pre-emergence control of weeds controlled by **Sharda Metolachlor 86.4EC**. The addition of Caparol or Cotoran will add control of weed species on their respective labels.

Post-Emergence-Directed (AR, AZ, CA, LA, MS, NM, OK, TN, TX, and Bootheel of MO): Apply **Sharda Metolachlor 86.4EC** + MSMA post-emergence-directed to 3-12" cotton according to the directions, limitations, restrictions and precautions on the MSMA product label, as well as the directions, limitations, and precautions for use of **Sharda Metolachlor 86.4EC** in the section for **Cotton-Sharda Metolachlor 86.4EC Alone-Post-emergence**. These treatments can be applied over previous registered treatments, including **Sharda Metolachlor 86.4EC**; however, the maximum label rate of any product must not be exceeded. Cotoran or Caparol may be added to

the **Sharda Metolachlor 86.4EC** + MSMA tank mixture according to the respective label directions for application to 3-12" cotton. When these mixtures are used, follow the mixing instructions for **Sharda Metolachlor 86.4EC** + Caparol or Cotoran and then add the MSMA product.

Restrictions:

- Do not use **Sharda Metolachlor 86.4EC** in tank mix with premixes of MSMA plus herbicides other than those registered for use in tank mixture with **Sharda Metolachlor 86.4EC** on cotton.
- Do not apply after first cotton bloom.

PEANUTS

Sharda Metolachlor 86.4EC ALONE

Apply **Sharda Metolachlor 86.4EC** pre-plant incorporated, post-plant incorporated, pre-emergence, or lay-by using the rates specified below.

Pre-Plant Incorporated or Pre-Emergence: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Post-Plant Incorporated: Apply and shallowly incorporate **Sharda Metolachlor 86.4EC** into the soil after planting but before peanut germination. Keep incorporation depth and incorporating implements above the seed or seed will be damaged.

Lay-by: Apply **Sharda Metolachlor 86.4EC** to the soil immediately after the last normal cultivation.

Apply **Sharda Metolachlor 86.4EC** alone, pre-plant incorporated, post-plant incorporated, pre-emergence, or lay-by at a broadcast rate of 1.0-1.33 pts./A in the Southeast and 0.85-1.33 pts./A in NM, OK, and TX.

Florida beggarweed in the Southeast (Partial control): Apply 1.33-2.0 pts./A pre-emergence.

Note: **Sharda Metolachlor 86.4EC** alone can be applied as directed after any of the following preplant incorporated herbicides when used according to label instructions:

Balan: 3-4 qts./A	Treflan EC: 1 pt./A	Vernam®: 2.33-3 pts./A
Sonalan: 1.25-3 pts./A	Pursuit: 0.25 pt./A	Prowl: 1-2 pts./A

Restrictions:

- Do not graze or feed peanut forage or fodder to livestock for 30 days following application.
- Do not apply within 90 days of harvest.

Sharda Metolachlor 86.4EC COMBINATIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Tank Mixture with Balan L.C.

Sharda Metolachlor 86.4EC + Balan tank mixture applied pre-plant incorporated controls those weeds listed under **Sharda Metolachlor 86.4EC Applied Alone** and those weeds as listed on the Balan label.

Apply 1.0-1.33 pts./A of **Sharda Metolachlor 86.4EC** + 3-4 qts./A of Balan in a minimum of 10 gals. of spray volume per acre for ground application or in a minimum of 5.0 gals. of spray volume per acre for aerial application. Follow the procedures for Balan on the Balan label for soil preparation and incorporation of this tank mix. Apply and incorporate **Sharda Metolachlor 86.4EC** + Balan up to 14 days prior to planting.

Note: Follow all restrictions and precautions on the Balan label.

Multiple Applications

Where weed pressure is heavy or where species difficult to control are expected, **Sharda Metolachlor 86.4EC** is most effective when used as follows:

Southeast Only (AL, FL, GA, NC, SC, VA)

1st Application: Apply **Sharda Metolachlor 86.4EC** pre-plant incorporated as directed under **Peanuts-Sharda Metolachlor 86.4EC Alone** or apply **Sharda Metolachlor 86.4EC** + Balan pre-plant incorporated as directed previously in this section. Refer to the respective section for weeds controlled.

2nd Application: Apply 1.0-2.0 pts./A **Sharda Metolachlor 86.4EC** any time from pre-emergence up to "ground cracking" for extended control of weeds not yet emerged. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for a list of weeds controlled.

3rd Application: Apply **Sharda Metolachlor 86.4EC** at lay-by as directed under **Peanuts-Sharda Metolachlor 86.4EC Alone**. Use only when late germinating weeds are expected to be a problem. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for a list of weeds controlled.

Restrictions:

- Do not graze or feed peanut forage or fodder to livestock for 30 days following application.
- Do not apply within 90 days of harvest.
- Do not apply more than the equivalent of 2.66 pts. of **Sharda Metolachlor 86.4EC** per acre during any one year.

Southwest Only (NM, OK, TX)

1st Application: Apply **Sharda Metolachlor 86.4EC** pre-plant incorporated or pre-emergence or at-cracking as directed previously in this section. Refer to the respective section for weeds controlled.

2nd Application: Apply **Sharda Metolachlor 86.4EC** at lay-by as directed under **Peanuts-Sharda Metolachlor 86.4EC Alone** on this label. Use only when late germinating weeds are expected to be a problem. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for a list of weeds controlled.

Restrictions:

- Do not graze or feed peanut forage or fodder to livestock for 30 days following application.
- Do not apply within 90 days of harvest.
- Do not apply more than the equivalent of 2.67 pts. of **Sharda Metolachlor 86.4EC** per acre during any one year.
- Do not use **Sharda Metolachlor 86.4EC** after peanuts have emerged.

Tank Mixture or Sequentially with Pursuit

The tank mixture or sequential treatment of **Sharda Metolachlor 86.4EC** and Pursuit controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Pursuit alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Pursuit label for weeds controlled by Pursuit. Refer to the respective labels for application methods, timing, rates, restrictions, and precautions; and use in accordance with the more restrictive label. **Sharda Metolachlor 86.4EC** will not control emerged weeds.

Restriction:

- Do not exceed the maximum specified label rate of either product.

Tank Mixture with Sonalan

The tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Sonalan alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Sonalan label for weeds controlled by Sonalan. Apply **Sharda Metolachlor 86.4EC** + Sonalan pre-plant incorporated, using the appropriate rate from the **Sharda Metolachlor 86.4EC + Sonalan-Peanuts Sharda Metolachlor 86.4EC + Sonalan-Peanuts** table. Follow soil preparation procedures for Sonalan. Refer to the Peanut Sonalan/**Sharda Metolachlor 86.4EC** Tank Mixture label for incorporation specifications.

Sharda Metolachlor 86.4EC + Sonalan-Peanuts

USE AREAS	SOIL TEXTURE	BROADCAST RATES PER ACRE	
		Sharda Metolachlor 86.4EC	SONALAN
Southeast	Coarse	1.0 - 1.33 pts.	1.25 - 2.0 pts.
	Medium		1.75 - 2.50 pts.
	Fine		2.25 - 3.0 pts.
NM, OK, TX	Coarse	0.85 - 1.33 pts.	1.25 - 2.0 pts.
	Medium		1.75 - 2.50 pts.
	Fine		2.25 - 3.0 pts.

Follow all use directions, limitations, restrictions, precautions, and instructions regarding application to peanuts on the **Sharda Metolachlor 86.4EC** and Sonalan labels.

Tank Mixture with Prowl

Sharda Metolachlor 86.4EC + Prowl applied pre-plant incorporated controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone plus Texas panicum, field sandbur, johnsongrass from seed, lambsquarters, kochia, annual spurge, and other species on the Prowl label. Apply **Sharda Metolachlor 86.4EC** + Prowl by ground or by aerial equipment within 14 days before planting. Incorporate into the top 1-2" of soil before planting and within 7 days of application, using a finishing disk or similar implement capable of providing uniform incorporation. If peanuts will be planted on beds, apply and incorporate after bed formation. Refer to the **Incorporation** instructions of the respective labels for additional directions.

Apply **Sharda Metolachlor 86.4EC** + Prowl pre-plant incorporated using the appropriate rates from the **Sharda Metolachlor 86.4EC + Prowl-Peanuts** table.

Sharda Metolachlor 86.4EC + Prowl-Peanuts

USE AREAS	SOIL TEXTURE	BROADCAST RATES PER ACRE
		Sharda Metolachlor 86.4EC + PROWL
NM, OK, TX	Sandy, loamy sand	0.85 + 1.0 - 1.5 pts.
	Sandy loam	0.85 - 1.0 + 1.0 - 1.5 pts.
	Fine	1.33 + 1.0 - 1.5 pts.
Other Peanut-Growing States	Sandy, loamy sand	1.0 - 1.33 + 1.5 - 2.0 pts.

	Sandy loam Fine	1.0 - 1.33 + 1.5 - 2.0 pts. 1.33 + 1.5 - 2.0 pts.
Follow all use directions, limitations, restrictions, precautions, and instructions regarding application to peanuts on the Sharda Metolachlor 86.4EC and Prowl labels.		

Tank Mixture or Sequentially with Starfire

Sharda Metolachlor 86.4EC + Starfire applied at ground cracking or sequentially will control or suppress small (1-6") emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **Sharda Metolachlor 86.4EC Applied Alone** section of this label. Apply 11 fl. oz./A of Starfire with the appropriate **Sharda Metolachlor 86.4EC** rate from the **Peanuts-Sharda Metolachlor 86.4EC Alone** section in a minimum spray volume of 20 gals./A with ground equipment. A second application of **Sharda Metolachlor 86.4EC** + Starfire may be made 28 days after ground cracking. (Refer to the **Peanuts-Sharda Metolachlor 86.4EC Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are indicated.) A second Starfire application may be made in all peanut growing areas if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

Tank Mixture or Sequentially with Starfire + Basagran

Adding Basagran to the **Sharda Metolachlor 86.4EC** + Starfire mixture improves control of prickly sida, cocklebur, smartweed, and bristly starbur. **Sharda Metolachlor 86.4EC** + Starfire + Basagran applied at ground cracking or sequentially will control or suppress small (1-6") emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **Sharda Metolachlor 86.4EC Applied Alone** section of this label. Apply 1 pt./A of Basagran + 11 fl. oz./A of Starfire with the appropriate **Sharda Metolachlor 86.4EC** rate from the **Peanuts-Sharda Metolachlor 86.4EC Alone** section in a minimum spray volume of 20 gals./A with ground equipment. A second application of **Sharda Metolachlor 86.4EC** + Starfire + Basagran may be made 28 days after ground cracking. (Refer to the **Peanuts-Sharda Metolachlor 86.4EC Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are indicated.) A second Starfire + Basagran application may be made in all peanut growing areas, if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

Tank Mixture or Sequentially with Starfire + Butyrac 200 or Butoxone 200

Adding Butyrac 200 or Butoxone 200 to the **Sharda Metolachlor 86.4EC** + Starfire mixture improves control of sicklepod, morningglory, and cocklebur. **Sharda Metolachlor 86.4EC** + Starfire + Butyrac 200 or Butoxone 200 applied at ground cracking or sequentially will control or suppress small (1-6") emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **Sharda Metolachlor 86.4EC Applied Alone** section of this label. Apply 11 fl. oz./A of Starfire + 8-16 fl. oz./A (0.125-0.25 lb./A) of Butyrac 200 or Butoxone 200 with the appropriate **Sharda Metolachlor 86.4EC** rate from the **Peanuts-Sharda Metolachlor 86.4EC Alone** section in a minimum spray volume of 20 gals./A with ground equipment. A second application of **Sharda Metolachlor 86.4EC** + Starfire + Butyrac 200 or Butoxone 200 may be made 28 days after ground cracking. (Refer to the **Peanuts-Sharda Metolachlor 86.4EC Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are indicated.) A second Starfire + Butyrac 200 or Butoxone 200 application may be made in all peanut growing areas if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

Tank Mixture or Sequentially with Basagran

Sharda Metolachlor 86.4EC + Basagran applied at ground cracking or sequentially will control species on the Basagran label and provide residual control of species listed in the **Sharda Metolachlor 86.4EC Applied Alone** section of this label. Apply 1-2 pts./A of Basagran in 20 gals./A, depending on weed species and stage of growth as specified on the Basagran label, with the appropriate **Sharda Metolachlor 86.4EC** rate from the **Peanuts-Sharda Metolachlor 86.4EC Alone** section. A second application of the combination may be made before peanut pegging. (Refer to the **Peanuts-Sharda Metolachlor 86.4EC Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are indicated.) A second Basagran application may be made in all peanut growing areas if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

Tank Mixture or Sequentially with Basagran + Butyrac 200 or Butoxone 200

Sharda Metolachlor 86.4EC + Basagran + Butyrac 200 or Butoxone 200 applied at ground cracking or sequentially will control species on the Basagran label and on the Butyrac or Butoxone labels, especially morningglories. Apply 1.5-2 pts./A of Basagran + 8 fl. oz./A of Butyrac 200 or Butoxone 200 in 20 gals./A, depending on weed species and stage of growth as specified on the Basagran label, with the appropriate **Sharda Metolachlor 86.4EC** rate from the **Peanuts-Sharda Metolachlor 86.4EC Alone** section. A second application of the combination may be made before peanut pegging. (Refer to the **Peanuts-Sharda Metolachlor 86.4EC Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are indicated.) A second Basagran + Butyrac 200 or Butoxone 200 application may be made in all peanut growing areas, if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

Tank Mixture or Sequentially with Storm®

Sharda Metolachlor 86.4EC + Storm applied at ground cracking through 2 expanded tetra foliate leaves or **Sharda Metolachlor 86.4EC** applied according to the directions for **Sharda Metolachlor 86.4EC Alone** and followed with an at-cracking through post-emergence treatment of Storm as specified on its label will control species on the Storm label and provide residual control of species listed in the **Sharda Metolachlor 86.4EC Applied Alone** section of this label. **Sharda Metolachlor 86.4EC** will not control emerged weeds. Refer to the **Peanuts-Sharda Metolachlor 86.4EC Alone** section and to the Storm label and follow all directions, limitations, and restrictions for each product.

POD CROPS

Pod crops, including garbanzo, great northern beans, kidney beans, lima beans, mung beans, navy beans, peas (English*; southern peas, such as blackeye, pinkeye, crowder, etc.), pinto beans, snap beans (green, wax, string), lentils, and lupines (sweet, white, white sweet, and grain).

Sharda Metolachlor 86.4EC ALONE

Apply **Sharda Metolachlor 86.4EC**, either pre-plant incorporated or pre-emergence, using the appropriate rate specified below.

Pre-Plant Incorporated or Pre-Emergence: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Coarse soils (<3% organic matter): Apply 1.0-1.33 pts./A.

Coarse soils (>3% organic matter): Apply 1.33 pts./A.

Medium soils: Apply 1.33-1.67 pts./A.

Fine soils (<3% organic matter): Apply 1.33 - 1.67 pts./A.

Fine soils (>3% organic matter): Apply 1.67-2 pts./A.

Restrictions:

- Do not use on English peas in northeastern U.S.; other areas only make pre-emergence applications.
- Do not cut for hay within 120 days following an **Sharda Metolachlor 86.4EC** application.
- Do not apply more than 3.0 pts./A of **Sharda Metolachlor 86.4EC** during any one crop year.

Sharda Metolachlor 86.4EC COMBINATIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Restriction:

- When applying **Sharda Metolachlor 86.4EC** in combination on pod crops, do not cut for hay within 120 days following application.

Tank Mixture and Sequential Applications with Eptam-Beans (Green or Dry)

This mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Eptam alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section of this label for weeds controlled by **Sharda Metolachlor 86.4EC** alone and to the Eptam label for weeds controlled by Eptam.

Pre-Plant Incorporated: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Sequential: Apply Eptam alone pre-plant incorporated as specified on that label. Follow with a pre-emergence application of **Sharda Metolachlor 86.4EC** at rates specified for **Sharda Metolachlor 86.4EC** alone, during planting (behind the planter), or after planting but before the weeds or crop emerge.

Refer to the **Product Information** section of this label and to the Eptam label for weather, cultural practices, and all other restrictions, precautions and limitations that affect performance of these products.

Apply 2.5-4.5 pts./A of Eptam 7E with **Sharda Metolachlor 86.4EC** as specified. Refer to the Eptam label for rate limitations depending on geographical area and for species and varietal restrictions.

Coarse soils (<3% organic matter): Apply 0.85 pts./A.

Coarse soils (>3% organic matter): Apply 1.0 pts./A.

Medium soils (<3% organic matter): Apply 1.0 pts./A.

Medium soils (>3% organic matter): Apply 1.33 pts./A.

Fine soils (<3% organic matter): Apply 1.33 pts./A.

Fine soils (>3% organic matter): Apply 1.33 - 1.67 pts./A.

Restriction:

- Do not exceed 3.5 pts./A of Eptam 7E on small white beans or green beans grown on coarse textured soils.

Tank Mixture with Treflan-Beans (Dry-Kidney, Navy, Pinto, etc.; Lima; and Snap)

Sharda Metolachlor 86.4EC + Treflan tank mix applied pre-plant incorporated controls those weeds listed under **Sharda Metolachlor 86.4EC Applied Alone** and those weeds listed for Treflan alone on the Treflan label. **Sharda Metolachlor 86.4EC** + Treflan may be applied by ground or by aerial equipment and incorporated up to 14 days prior to planting. Follow the instructions on this label and on the respective Treflan label using equipment that provides uniform 2" incorporation.

Apply **Sharda Metolachlor 86.4EC** + Treflan tank mix using the appropriate **Sharda Metolachlor 86.4EC** rate specified for **Sharda Metolachlor 86.4EC** alone, and the Treflan rate from the Dry Beans, and the Lima and Snap Beans sections of the respective Treflan label. Choose the product rate for the specific soil texture/organic matter classification and weed species expected.

Note: Follow all restrictions and precautions on the respective Treflan label and in the **Pod Crops-Sharda Metolachlor 86.4EC Alone** section of this label.

POTATOES

Sharda Metolachlor 86.4EC ALONE

Apply **Sharda Metolachlor 86.4EC**, either incorporated, pre-emergence, or after hilling/lay-by, according to directions specified below for control of weeds listed under the **Product Information** section. Within a rate range, use the lower rate within the specified rate range on soils relatively coarse-textured or low in organic matter; use the higher rate within the specified rate range on soils relatively fine-textured or high in organic matter. Effectiveness will be reduced if later cultural practices expose untreated soil.

Incorporated: Apply **Sharda Metolachlor 86.4EC** at 1.0-2.0 pts./A to the soil and incorporate into the top 3" before planting using a finishing disk, harrow, rolling cultivator, or similar implement. Planting and later cultural practices must not bring untreated soil to the surface. Post-plant incorporated application may be made any time after planting to drag-off but before potato emergence. Use an implement that evenly distributes **Sharda Metolachlor 86.4EC** in the top 2" of soil. Do not damage potato seed pieces or sprouts with incorporation equipment.

Pre-Emergence: Apply **Sharda Metolachlor 86.4EC** at 1.0-2.0 pts./A, either after planting as a pre-emergence, delayed Pre-emergence, after drag-off or hilling treatment, but before weeds emerge. Up to 2.75 pts./A of **Sharda Metolachlor 86.4EC** alone may be used where soil organic matter is between 6% and 20%.

After Hilling/Lay-by: Apply 1.67 pts./A of **Sharda Metolachlor 86.4EC** after hilling/at lay-by to control **Sharda Metolachlor 86.4EC** sensitive species for remainder of the growing season. This application will not control emerged weeds. It may be applied over a previous **Sharda Metolachlor 86.4EC** application but do not apply more than 3.7 pts./A of **Sharda Metolachlor 86.4EC** in a single crop season.

Restrictions:

- Do not use on sweet potatoes or yams.
- Do not use on muck or peat soils. If cool, wet soil conditions occur after application, **Sharda Metolachlor 86.4EC** may delay maturity and/or reduce yield of Superior and other early maturing potato varieties.
- Do not apply both as a pre-emergence and an incorporated treatment.
- Potatoes treated with **Sharda Metolachlor 86.4EC** must not be harvested within 60 days after the at-planting to drag-off application or within 40 days after a lay-by application.
- Do not use in Kern County, CA.

Sharda Metolachlor 86.4EC COMBINATIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Tank Mixture with Sencor or Lexone

In addition to those weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC** applied in tank mix combination with, or sequentially with, any of the registered Sencor or Lexone formulations, also controls the following broadleaf weeds: hemp sesbania, lambsquarters, prickly sida, ragweed, smartweed, velvetleaf, Venice mallow, and wild mustard.

Sharda Metolachlor 86.4EC applied in tank mix combination with, or sequentially with, any of the registered Sencor or Lexone formulations, partially controls cocklebur, hairy nightshade, and jimsonweed.

Sharda Metolachlor 86.4EC at 1.0-2.0 pts./A plus the labeled Sencor/Lexone use rate may be used pre-emergence through after last hilling. Apply 1.0-1.33 pts./A of **Sharda Metolachlor 86.4EC** on coarse soils and 1.33-2.0 pts./A on other soil textures. Within this rate range, use the lower rate within the specified rate range on soils relatively coarse-textured or low in organic matter; use the higher rate within the specified rate range on soils relatively fine-textured or high in organic matter. Effectiveness will be reduced if later cultural practices expose untreated soil. **Sharda Metolachlor 86.4EC** will not control emerged weeds.

Refer to the Sencor or Lexone labels for precautionary statements, restrictions, application information, and weeds controlled.

Precautions:

- Make post-emergence applications to potatoes only as a directed or semi-directed spray to avoid chlorosis, minor necrosis, or leaf distortion.

Restrictions:

- Do not use **Sharda Metolachlor 86.4EC** + Sencor or Lexone on potatoes in Kern County, CA.
- Do not apply to sweet potatoes or yams.
- Do not harvest potatoes treated with **Sharda Metolachlor 86.4EC** in tank mixture with Sencor or Lexone within 60 days after application.
- Do not harvest potatoes within 40 days after a lay-by application of **Sharda Metolachlor 86.4EC**.
- Do not use this tank mixture on muck or peat soils.

Sharda Metolachlor 86.4EC + Lorox Tank Mixture (East of Rocky Mountains)

Apply **Sharda Metolachlor 86.4EC** in a tank-mix combination with any of the registered Lorox formulations as a pre-emergence broadcast application to potatoes. Apply to the soil surface after planting and before emergence of the crop or after final drag-off according to the rates specified in the **Sharda Metolachlor 86.4EC + Lorox-Potatoes (East of Rocky Mountains)** table.

Sharda Metolachlor 86.4EC + Lorox-Potatoes (East of Rocky Mountains)

SOIL TEXTURE	SOIL TEXTURE	BROADCAST RATES PER ACRE	
		Sharda Metolachlor 86.4EC	Lorox*
1-3% Organic Matter	Coarse (Sandy loam)	1.0 pts.	1.0 - 1.5 lbs.
	Medium (Loam, silt loam, silt)	1.33 pts.	1.5 - 2.0 lbs.
3-5% Organic Matter	Coarse (Sandy loam)	1.33 pts.	1.5 - 2.0 lbs.
	Medium (Loam, silt loam, silt)	1.5 - 2.0 pts.	2.0 - 2.5 lbs.

When using Lorox L or Lorox DF, use equivalent rates. 1 pt. of Lorox L equals 1 lb. of Lorox DF.

Restriction:

- Do not use on sands or loamy sands and do not incorporate or spray over the top of emerged potatoes.

Refer to the **Product Information** section of this label and to the Lorox label for precautionary statements, restrictions, application instructions, and weeds controlled.

Tank Mixture with Prowl 4E

In addition to the weeds controlled by **Sharda Metolachlor 86.4EC** alone, this tank mixture with Prowl 4E controls kochia, lambsquarters, purslane, annual spurge, stinging nettle, and others specified on the Prowl 4E Alone label. Apply **Sharda Metolachlor 86.4EC + Prowl 4E** pre-emergence, pre-emergence incorporated, or early post-emergence, according to the specific directions on the Prowl 4E label, using the rates in the **Sharda Metolachlor 86.4EC + Prowl 4E-Potatoes** table.

Sharda Metolachlor 86.4EC + Prowl 4E - Potatoes

SOIL TEXTURE	BROADCAST RATES PER ACRE	
	Sharda Metolachlor 86.4EC + PROWL 4E*	
<3% Organic Matter	Coarse	1.0 - 1.33 + 1.0 - 1.5 pts.
	Medium	1.33 pts. + 1.5 - 2.0 pts.
	Fine	1.33 - 1.67 pts. + 2.0 - 3.0 pts.
3-5% Organic Matter	Coarse	1.0 - 1.33 pts. + 1.0 - 1.5 pts.
	Medium	1.33 - 1.67 pts. + 2.0 - 3.0 pts.
	Fine	1.67 - 2.0 pts. + 3.0 pts.

*When using other formulations of Prowl, use equivalent rates of active ingredient.

Refer to the **Sharda Metolachlor 86.4EC** and Prowl 4E labels and observe all directions, timings, limitations, precautions, and restrictions concerning the use of these products on potatoes and follow the most restrictive.

Tank Mixture with Prowl 4E + Eptam

In addition to the weeds controlled by **Sharda Metolachlor 86.4EC** alone, this tank mixture will control those species on the Prowl 4E and Eptam labels. Refer to the **Sharda Metolachlor 86.4EC + Prowl 4E** labels for rates of those products and add Eptam 7E at 3.5-7.0 pts./A, depending on geographical area. Refer to the respective **Sharda Metolachlor 86.4EC**, Prowl 4E, and Eptam labels and observe all directions, limitations, precautions, and restrictions concerning the use of these products on potatoes and follow the most restrictive.

SAFFLOWER

Sharda Metolachlor 86.4EC ALONE

Pre-plant Incorporated or Pre-Emergence: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Coarse soils (<3% organic matter): Apply 1.0 - 1.33 pts./A.

Coarse soils (>3% organic matter): Apply 1.33 pts./A.

Medium soils: Apply 1.33 - 1.67 pts./A.

Fine soils (<3% organic matter): Apply 1.33 - 1.67 pts./A.

Fine soils (>3% organic matter): Apply 1.67 - 2.0 pts./A.

GRAIN OR FORAGE SORGHUM (SEED TREATED WITH CONCEP® OR SCREEN®)

Sharda Metolachlor 86.4EC ALONE

Apply **Sharda Metolachlor 86.4EC** either pre-plant surface, pre-plant incorporated, or pre-emergence, using the appropriate rate specified below. Apply **Sharda Metolachlor 86.4EC** alone only when the sorghum seed has been properly treated by the seed company with Concep or Screen.

Pre-Plant Surface-Applied: Refer to instructions for use of **Sharda Metolachlor 86.4EC** under **Application Instructions**. For minimum-tillage or no-tillage systems only, **Sharda Metolachlor 86.4EC** may be applied up to 45 days before planting in CO, IA, IL, KS, MO, NE, and SD. Use only split applications for treatments made 30-45 days prior to planting with $\frac{2}{3}$ of the broadcast rate applied initially and the remaining $\frac{1}{3}$ at planting. Apply 1.50 pts./A of **Sharda Metolachlor 86.4EC** on medium soils or 1.67 pts./A on fine soils. Treatments less than 30 days prior to planting may be made either as a split or single application. Apply 1.33 pts./A of **Sharda Metolachlor 86.4EC** on coarse soils not more than 2 weeks prior to planting. Under dry conditions, irrigate after application to move **Sharda Metolachlor 86.4EC** into the soil.

Pre-plant Incorporated or Pre-emergence: Refer to instructions for use of **Sharda Metolachlor 86.4EC** under **Application Instructions**. Make broadcast as follows:

Coarse soils: 1.0 - 1.33 pts./A

Medium soils: 1.33 - 1.50 pts./A

Fine soils: 1.33 - 1.67 pts./A

Precautions:

- If sorghum seed is not properly treated with Concep or Screen, **Sharda Metolachlor 86.4EC** will severely injure the crop.
- Under high soil moisture conditions prior to sorghum emergence, injury may occur following the use of **Sharda Metolachlor 86.4EC**. The crop will normally outgrow this effect.

Restrictions:

- Do not use **Sharda Metolachlor 86.4EC** on sorghum grown under dry mulch tillage.
- Except for the split pre-plant surface treatment, do not make more than one application per year.

Sharda Metolachlor 86.4EC COMBINATIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Sharda Metolachlor 86.4EC tank mixtures with AAtrex may be applied in water or fluid fertilizer. Apply **Sharda Metolachlor 86.4EC** in tank mixtures only when the sorghum seed has been properly treated by the seed company with Concep or Screen.

IMPORTANT: FOR TANK MIXTURES WITH AATREX (OR OTHER BRANDS OF ATRAZINE)

If applying **Sharda Metolachlor 86.4EC** in tank mixture with AAtrex, all the restrictions and rate limitations on the AAtrex label must be followed if the label directions are more restrictive/protective than those on this label. In addition, if AAtrex is/must be applied at rates lower than those listed on this label, broadleaf weed control may be affected. Refer to the AAtrex label for weeds controlled at the reduced rates.

Precautions:

Applications of **Sharda Metolachlor 86.4EC** + AAtrex on highly alkaline soils or on eroded areas where calcareous subsoils are exposed may cause sorghum injury.

If sorghum seed is not properly treated with Concep or Screen, **Sharda Metolachlor 86.4EC** + AAtrex may severely injure the crop. Under high soil moisture conditions prior to sorghum emergence, injury may occur following the use of **Sharda Metolachlor 86.4EC** + AAtrex. The crop will normally outgrow this effect.

Restrictions:

- Do not use **Sharda Metolachlor 86.4EC** + AAtrex on sorghum grown under dry mulch tillage.
- Do not make more than one application per year Except for the split pre-plant surface treatment.

Tank Mixture with AAtrex

In addition to the weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC** + AAtrex also controls the following broadleaf weeds when applied either pre-plant surface, pre-plant incorporated, or pre-emergence:

Cocklebur
Common Purslane

Hairy Nightshade
Lambsquarters

Morningglory
Ragweed

Smartweed
Velvetleaf

Pre-Plant Surface-Applied: Refer to instructions for use of **Sharda Metolachlor 86.4EC** under **Application Instructions**. For minimum-tillage or no-tillage systems only, **Sharda Metolachlor 86.4EC** + AAtrex may be applied up to 45 days prior to planting in IA, IL, eastern KS, MO, NE, and SD. Use only split applications for treatments made 30-45 days prior to planting with $\frac{2}{3}$ of the broadcast rate applied initially and the remaining $\frac{1}{3}$ at planting. Apply as follows:

Medium soils with >1.5% organic matter: 1.50 pts./A of Sharda Metolachlor 86.4EC + 1.7 - 2 lbs./A of AAtrex Nine-O*

Fine soils with <1.5% organic matter: 1.50 pts./A of Sharda Metolachlor 86.4EC + 1.7 - 2 lbs./A of AAtrex Nine-O

Fine soils with >1.5% organic matter: 1.67 pts./A of Sharda Metolachlor 86.4EC + 2 - 2.2 lbs./A of AAtrex Nine-O

*When using AAtrex 4L, use equivalent rates. One lb. of AAtrex Nine-O equals 1.8 pts. of AAtrex 4L.

Treatments less than 30 days prior to planting may be made either as a split or single application. Under dry conditions, irrigate after application to move **Sharda Metolachlor 86.4EC** + AAtrex into the soil.

Restrictions:

- Do not use on coarse soils.
- Do not use on medium soils with <1.5% organic matter.

Pre-Plant Incorporated or Pre-Emergence: Refer to instructions for use of **Sharda Metolachlor 86.4EC** under **Application Instructions**. Apply as follows:

Medium soils with >1.5% organic matter: 1.0 pts./A of Sharda Metolachlor 86.4EC + 1.3 lbs./A of AAtrex Nine-O*

Fine soils with <1.5% organic matter: 1.0 pts./A of Sharda Metolachlor 86.4EC + 1.3 lbs./A of AAtrex Nine-O

Fine soils with >1.5% organic matter: 1.2 - 1.33 pts./A of Sharda Metolachlor 86.4EC + 1.6 - 1.8 lbs./A of AAtrex Nine-O

*When using AAtrex 4L, use equivalent rates. One lb. of AAtrex Nine-O equals 1.8 pts. of AAtrex 4L.

Restrictions:

- Do not use on coarse soils.
- Do not use on medium soils with <1.5% organic matter.
- Do not use in NM, OK, or TX, except in northeast OK and the TX Gulf Coast and Blacklands areas.
- Do not apply pre-plant incorporated in AZ or the Imperial Valley of CA.

Tank Mixture of Sharda Metolachlor 86.4EC or Sharda Metolachlor 86.4EC + AAtrex, with Gramoxone Extra, Landmaster BW, or Roundup for Minimum-Tillage or No-Tillage Systems

In minimum-tillage or no-tillage systems where sorghum (seed treated with Concep or Screen) is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Extra, Landmaster BW, or Roundup may be tank mixed with **Sharda Metolachlor 86.4EC** or **Sharda Metolachlor 86.4EC + AAtrex**. In Minimum-Tillage and No-Tillage systems, mix with Gramoxone Extra for control of most emerged annual weeds and suppression of perennial weeds; or with Landmaster BW for suppression of emerged field bindweed and control or suppression of annual weeds; or with Roundup for control of most emerged annual and perennial weeds. Refer to the label of each product used in combination and observe the planting details, restrictions, and all other precautions and limitations.

The **Sharda Metolachlor 86.4EC** or **Sharda Metolachlor 86.4EC + AAtrex** portion of the tank mixture provides pre-emergence control of the weeds listed on this label under the respective sections.

Application Instructions: Apply before, during, or after planting, but before sorghum emerges, at the appropriate rates listed under **Grain or Forage Sorghum-Sharda Metolachlor 86.4EC Alone** or **-Sharda Metolachlor 86.4EC Combinations- Sharda Metolachlor 86.4EC + AAtrex**, respectively. Add Gramoxone Extra, Landmaster BW, or Roundup at the following broadcast rates:

Gramoxone Extra:

Weeds 1-3": 1.5-2 pts./A

Weeds 3-6": 2-2.5 pts./A

Weeds 6": 2.5-3 pts./A

Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50-74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6".

Landmaster BW: 27-54 oz./A depending on weed species and size. See the Landmaster BW label for weeds controlled, rates for specific weeds, and other information concerning use.

Roundup: See the Roundup or Roundup RT label for weeds controlled, rates, and other use directions. Apply in a minimum of 20 gals. of water per acre with conventional spray equipment.

SOYBEANS

Sharda Metolachlor 86.4EC ALONE

Apply **Sharda Metolachlor 86.4EC**, either pre-plant surface-applied, pre-plant incorporated, pre-emergence, or post-emergence using the appropriate rate specified below.

Pre-Plant Surface-Applied, Pre-Plant Incorporated, Pre-Emergence: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Post-Emergence: Follow the Tank Mixture instructions under **Post-Emergence Applications**.

Pre-Plant Surface-Applied

Fall Application (Apply after September 30th in MN, ND, SD, WI and North of Route 30 in IA; Apply after October 15th north of Route 91 in NE and South of Route 30 in IA; Apply after October 31st north of Route 136 in IL): In all locations, apply to crop stubble after harvest when the sustained soil temperature at a 4" depth is less than 55°F and falling. In minimum-till or no-tillage systems on soils having greater than 2.5% organic matter, use 1.67-2.0 pts./A on medium-textured and 2.0 pts./A on fine-textured soils. A tillage operation may precede the application. Minimize furrow and ridge formation in the tillage operations.

Restrictions:

- If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate for soybeans.
- A fall and/or a spring tillage may follow application, but do not exceed an incorporation depth greater than 2-3".
- Do not apply to frozen ground.

Use on medium and fine soils with minimum-tillage or no-tillage systems in CO, CT, DE, IA, IL, IN, KS, KY, MA, MD, ME, MI, MN, MO, MT, ND, NE, NH, NY, OH, PA, RI, SD, TN, VA, VT, WI, WV, and WY. Apply 2/3 the labeled rate of **Sharda Metolachlor 86.4EC** (1.67 pts./A on medium soils and 2.0 pts./A on fine soils) as a split treatment 30-45 days prior to planting and the remainder at planting. Applications made less than 30 days before planting may be as either a split or single treatment. Apply 1.33 pts./A on coarse soils not more than 2 weeks prior to planting.

Pre-Plant Incorporated or Pre-Emergence: Apply **Sharda Metolachlor 86.4EC** as follows:

Coarse soils with <3% organic matter: 1.0 - 1.33 pts./A

Coarse soils with >3% organic matter: 1.33 pts./A

Medium soils: 1.33 - 1.67 pts./A

Fine soils with <3% organic matter: 1.33 - 1.67 pts./A

Fine soils with >3% organic matter: 1.67 - 2.0 pts./A

Restrictions:

- The total **Sharda Metolachlor 86.4EC** rate applied to soybeans during any one crop must not exceed 2.75 pts./A.
- Do not graze or feed treated soybean forage, hay, or straw to livestock 30 days following treatment.

Note: On soybeans, **Sharda Metolachlor 86.4EC** may be used up to 2.75 pts./A as a pre-plant surface-applied, pre-plant incorporated, or pre-emergence treatment on soils having an organic matter content between 6-20%.

Post-Emergence:

From emergence up through the third trifoliate leaf stage:

Apply 1.0-1.33 pts./A as a post-emergence treatment to soybeans from emergence up through the **third trifoliate leaf stage**. **Sharda Metolachlor 86.4EC** will not control emerged weeds so it must be applied to a weed-free surface or in a tank mixture with products that provide post-emergence control of weeds present at the time of application.

From emergence up through the fifth trifoliate leaf stage:

Apply 1.0-1.33 pts./A as a post-emergence treatment to soybeans from emergence up through the **fifth trifoliate leaf stage**. **Sharda Metolachlor 86.4EC** will not control emerged weeds so it must be applied to a weed-free surface or in a tank mixture with products that provide post-emergence control of weeds present at the time of application.

Note: Make post-emergence applications at least 90 days before harvest.

Restrictions:

- Do not apply more than 1.33 pts./A post-emergence.
- Do not graze or feed treated forage or hay from soybeans to livestock following a post-emergence application.
- Do not make a post-emergence application of **Sharda Metolachlor 86.4EC** if a pre-plant surface, pre-plant incorporated, or
- Pre-emergence application of metolachlor products have already been applied.

Sharda Metolachlor 86.4EC COMBINATIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Water or fluid fertilizer may be used as carrier for **Sharda Metolachlor 86.4EC** in combination with Sencor, Lexone, Lorox, Lorox Plus, Gemini, Canopy, Preview, Pursuit, Scepter, Sonalan, or Command.

Note: For all of the following combinations, **Sharda Metolachlor 86.4EC** may be used up to 2.5 pts./A on soils having an organic matter content between 6-20%.

Restriction:

- Do not apply more than 2.75 pts./A of **Sharda Metolachlor 86.4EC** during any one crop year.

Pre-Plant/Pre-Emergence Applications

Tank Mixture with Sencor or Lexone

In addition to those weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC + Sencor or Lexone**, when applied as directed, controls the following broadleaf weeds:

Hairy Nightshade	Prickly Sida	Velvetleaf
Hemp Sesbania	Ragweed	Venice Mallow
Lambsquarters	Smartweed	Wild Mustard

Sharda Metolachlor 86.4EC + Sencor or Lexone, when applied as directed, partially controls cocklebur and jimsonweed.

Apply **Sharda Metolachlor 86.4EC** and Sencor or Lexone pre-plant incorporated or pre-emergence using the appropriate rates from the **Sharda Metolachlor 86.4EC + Sencor or Lexone-Soybeans** table.

Pre-Plant Incorporated or Pre-Emergence:

Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Procedures**.

Sequential: Apply **Sharda Metolachlor 86.4EC** alone **Pre-plant Incorporated**, as specified in the **Sharda Metolachlor 86.4EC + Sencor or Lexone-Soybeans** table for this tank mixture. Follow with a pre-emergence application of Sencor or Lexone during planting (behind the planter) or after planting but before weeds or soybeans emerge. Refer to the Sencor or Lexone labels for planting details and soybean variety restrictions.

Sharda Metolachlor 86.4EC + Sencor or Lexone-Soybeans

Do not use on muck or peat with >20% organic matter.

SOIL TEXTURE**	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Sencor/Lexone DF*
0.5 - <3% Organic Matter Coarse: Loamy sand (>2% organic matter), sandy loam Medium Fine Mississippi Delta only (Silty clay, clay)	0.85 - 1.0 pt. + 0.33 lb. 1.0 - 1.33 pts. + 0.5 lb. 1.33 pts. + 0.67 lb. 1.33 pts. + 1.0 lb.
>3% Organic Matter Coarse: Loamy sand (>2% organic matter), sandy loam Medium Fine Mississippi Delta only (Silty clay, clay)	1.0 pt. + 0.5 lb. 1.33 pts. + 0.67 lb.*** 1.33 - 1.67 pts. + 0.67 lb. 1.33 - 1.67 pts. + 1.0 lb.
*When using Sencor 4 or Lexone 4L, multiply lbs. of DF by 1.5 to get pts./A. ** On all sand and on loamy sand with <2% organic matter, do not use this tank mixture pre-emergence or the sequential treatment. Do not use the tank mixture pre-plant incorporated on any sand, loamy sand, or sandy loam. ***Use 0.5 lb./A if applied pre-plant incorporated.	

Precaution:

- Heavy rains soon after application can cause crop injury, especially in poorly drained areas where water stands for several days.

Restriction:

- Do not use the tank mix or sequential application on soil with <0.5% organic matter or on alkaline soil with a pH >7.4.

Tank Mixture with Lorox

In addition to those weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC + Lorox**, applied pre-emergence, controls lambsquarters, prickly sida, ragweed, smartweed, Venice mallow, and wild mustard.

Sharda Metolachlor 86.4EC + Lorox, when applied as directed, partially controls cocklebur, jimsonweed, morningglory, and velvetleaf.

Pre-Emergence: Apply during planting (behind planter) or after planting, but before weeds or soybeans emerge. Refer to the Lorox label for planting details. Apply the appropriate rates from the **Sharda Metolachlor 86.4EC + Lorox-Soybeans** table.

Precaution:

- To avoid crop injury, do not use on soil with less than 0.5% organic matter.

Sharda Metolachlor 86.4EC + Lorox-Soybeans

Do not use on muck or peat with >20% organic matter.

SOIL TEXTURE*, **	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Lorox DF***
0.5 - <3% Organic Matter	
Coarse	0.85 pt. + 1 lb.
Medium	1.0 pt. + 1 - 1.5 lbs.
Fine	1.33 pts. + 2 lbs.
>3% Organic Matter	
Coarse	1.0 pt. + 1 - 1.5 lbs.
Medium	1.33 pts. + 1.5 - 2 lbs.
Fine	1.33 - 1.67 pts. + 2.5 - 3 lbs.

*Do not use on sand, gravelly soils, or exposed subsoils.
**Do not use on loamy sand except in the northeastern U.S. on loamy sand with >1% organic matter.
***When using Lorox L or Lorox DF, use equivalent rates. One pt. of Lorox L equals 1 lb. of Lorox DF.

Tank Mixture with Treflan

Sharda Metolachlor 86.4EC + Treflan tank mix applied pre-plant incorporated controls those weeds listed under the **Sharda Metolachlor 86.4EC Applied Alone** section and those weeds listed for Treflan Alone on the Treflan label. **Sharda Metolachlor 86.4EC** + Treflan may be applied by ground or by aerial equipment and incorporated up to 14 days before planting. Follow the procedures on the Treflan and **Sharda Metolachlor 86.4EC** labels using equipment that provides uniform 2-inch incorporation.

Apply **Sharda Metolachlor 86.4EC** + Treflan tank mix, using the appropriate rate from the **Soybeans-Sharda Metolachlor 86.4EC Alone** section of this label and the Treflan Alone section of the Treflan label for the specific soil texture/organic matter classification and weed species expected.

To control DNA-resistant goosegrass* and other species on the respective labels where the soil organic matter is 3% or less, apply the rate listed in the **Sharda Metolachlor 86.4EC + Treflan-Organic Matter Content Less Than 3%** table.

Sharda Metolachlor 86.4EC + Treflan-Organic Matter Content Less Than 3%

Follow all restrictions and precautions on the respective Treflan label and in the **Soybeans- Sharda Metolachlor 86.4EC Alone** section of this label.

SOIL TEXTURE	BROADCAST RATES PER ACRE*
	Sharda Metolachlor 86.4EC + Treflan EC**
<3% Organic Matter	
Coarse	0.85 - 1.0 pt.
Medium	1.0 pt.
Fine	1.33 pts.
<2% Organic Matter	
Coarse	1 pt.
Medium	1.5 pts.
Fine	2 pts.
2-3% Organic Matter	
Coarse	1.5 pts.
Medium	1.5 pts.
Fine	2.0 pts.

*Where a range of rates is given for **Sharda Metolachlor 86.4EC**, use the minimum rate within the specified rate range where DNA-resistant goosegrass is the predominant species.
**When Treflan MTF or Treflan 5 is used, use comparable rates. Multiply pts. of Treflan E.C. by 1 for Treflan MTF and by 0.8 for Treflan 5.

Tank Mixture with Scepter

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Scepter alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Scepter label for weeds controlled by Scepter. Refer to the Scepter label for geographical locations where this tank mixture may be applied.

Apply **Sharda Metolachlor 86.4EC** + Scepter pre-plant incorporated or pre-emergence using rates in the **Sharda Metolachlor 86.4EC + Scepter-Soybeans** table. Follow use directions under **Application Instructions** on the Scepter label. For Pre-Plant Incorporated Applications, apply and incorporate within 30 days before planting. Observe all other restrictions, precautions and limitations on the Scepter labels.

Sharda Metolachlor 86.4EC + Scepter-Soybeans
Do not use on muck or peat with >20% organic matter.

SOIL TEXTURE	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Scepter
<3% Organic Matter Coarse Medium Fine	0.85 pt. + 0.67 pt.
	1.0 + 0.67 pt.
	1.33 pts. + 0.67 pt.
>3% Organic Matter Coarse Medium Fine	1.0 pt. + 0.67 pt.
	1.33 pts. + 0.67 pt.
	1.33 - 1.67 pts.* + 0.67 lb.
*Use the higher rate within the specified rate range of Sharda Metolachlor 86.4EC if heavy weed infestations are expected.	

Restrictions:

- Do not apply within 90 days of harvest.
- Do not graze or feed treated soybean forage, hay, or straw to livestock.

Tank Mixture with Lorox Plus

This tank mixture controls all weeds controlled by Sharda Metolachlor 86.4EC alone and by Lorox Plus alone. Refer to the Sharda Metolachlor 86.4EC Applied Alone section for weeds controlled by Sharda Metolachlor 86.4EC and to the Lorox Plus label for weeds controlled by Lorox Plus.

Apply Sharda Metolachlor 86.4EC + Lorox Plus pre-emergence after planting, but before soybeans emerge, using rates in the Sharda Metolachlor 86.4EC+ Lorox Plus-Soybeans table. Follow all use directions, limitations, restrictions, precautions, information regarding application to soybeans, and rotational restrictions on the Sharda Metolachlor 86.4EC and Lorox Plus labels.

Sharda Metolachlor 86.4EC+ Lorox Plus-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Lorox Plus (60 DF)
0.5% -3% Organic Matter Coarse Medium Fine	0.85 pt. + 12 - 14 oz.
	1.0 pt. + 14 - 16 oz.
	1.33 pts. + 16 - 18 oz.

Restriction:

- Do not apply to sand, or to any soil <0.5% organic matter, or to any soil with pH >6.8.

Tank Mixture with Gemini

This tank mixture controls all weeds controlled by Sharda Metolachlor 86.4EC alone and by Gemini alone. Refer to the Sharda Metolachlor 86.4EC Applied Alone section for weeds controlled by Sharda Metolachlor 86.4EC and to the Gemini label for weeds controlled by Gemini. Apply Sharda Metolachlor 86.4EC + Gemini pre-emergence after planting, but before soybeans emerge, using rates in the Sharda Metolachlor 86.4EC + Gemini-Soybeans table.

Note: Follow all use directions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the Sharda Metolachlor 86.4EC and Gemini labels.

Sharda Metolachlor 86.4EC + Gemini-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Gemini (60 DF)
0.5% -3% Organic Matter Coarse (Sandy loam only) Medium Fine	0.85 pt. + 12 - 16 oz.
	1.0 pt. + 16 - 20 oz.
	1.33 pts. + 20 - 24 oz.

Restriction:

- Do not apply to sand or loamy sand, or to any soil <0.5% organic matter, or to any soil with pH >7.0, except as in the directions for use on the Gemini label.

Tank Mixture with Canopy

This tank mixture controls all weeds controlled by Sharda Metolachlor 86.4EC alone and by Canopy alone. Refer to the Sharda Metolachlor 86.4EC Applied Alone section for weeds controlled by Sharda Metolachlor 86.4EC and to the Canopy label for weeds controlled by Canopy. Apply pre-plant incorporated or pre-emergence using the appropriate rates from the Sharda Metolachlor 86.4EC + Canopy-Soybeans table.

Pre-Plant Incorporated: Apply within 2 weeks of planting. Uniformly incorporate into the top 1-2 inches of soil before planting soybeans.

Pre-Emergence: Apply after planting, but before soybeans emerge.

Follow all use directions, varietal restrictions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and Canopy labels.

Sharda Metolachlor 86.4EC + Canopy-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Canopy
<3% Organic Matter Coarse Medium Fine	0.85 pt. + *
	1.0 pt. + *
	1.33 pts. + *
>3% Organic Matter Coarse Medium Fine	1.0 pt. + *
	1.33 pts. + *
	1.33 - 1.67 pts. + *

*Refer to the Canopy label for appropriate rate according to geographical location, soil and organic matter classification, and pH limitations.

Restriction:

- Do not apply to sand, or to any soil <0.5% organic matter, or to any soil with pH >7.0, except as in the directions for use on the Canopy label.

Tank Mixture with Preview

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Preview alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Preview label for weeds controlled by Preview. Apply pre-plant incorporated or pre-emergence, using the appropriate rates from the **Sharda Metolachlor 86.4EC + Canopy-Soybeans** table.

Pre-Plant Incorporated: Apply within 2 weeks of planting. Uniformly incorporate into the top 1-2 inches of soil before planting soybeans.

Pre-Emergence: Apply after planting, but before soybeans emerge.

Note: Follow all use directions, varietal restrictions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and Preview labels.

Sharda Metolachlor 86.4EC + Preview-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Preview 75 DF
0.5 - 3% Organic Matter Coarse Medium Fine	0.85 pt. + 6 oz.
	1.0 pt. + 7 oz.
	1.33 pts. + 8 oz.
3-5% Organic Matter Coarse Medium Fine	1.0 pt. + 7 oz.
	1.33 pts. + 8 oz.
	1.33 - 1.67 pts. + 9 - 10 oz.

Restriction:

- Do not apply to sand, or to any soil <0.5% organic matter, or to any soil with pH >6.8.

Tank Mixture with Command

Before making applications, read and strictly follow all use directions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and Command labels.

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Command alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Command label for weeds controlled by Command. Apply **Sharda Metolachlor 86.4EC** + Command pre-plant incorporated, using rates in the **Sharda Metolachlor 86.4EC + Command-Soybeans** table. Follow all Command application instructions as to incorporation interval, geographical location, equipment operation, soil moisture conditions, etc.

Sharda Metolachlor 86.4EC + Command-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE		
	Sharda Metolachlor 86.4EC +	Command 4E	
		Northern Region	Southern Region
0.5 - 3% Organic Matter Coarse Medium Fine	0.85 pt. 1.0 pt. 1.33 pts.	1.5 - 2 pts.	2 - 2.5 pts.
>3% Organic Matter Coarse Medium Fine	1.0 pt. 1.33 pts. 1.33 - 1.67 pts.		

Tank Mixture with Sonalan

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Sonalan alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Sonalan label for weeds controlled by Sonalan. Apply **Sharda Metolachlor 86.4EC** and Sonalan pre-plant incorporated using the appropriate rates from the **Sharda Metolachlor 86.4EC + Sonalan-Soybeans** table.

Pre-Plant Incorporated: Follow soil preparation procedures for Sonalan. Refer to the Sonalan/**Sharda Metolachlor 86.4EC** Tank Mixture label for incorporation specifications.

Sequential: Apply Sonalan alone pre-plant incorporated as specified on the Sonalan label. Follow with a pre-emergence application of **Sharda Metolachlor 86.4EC** during planting (behind the planter) or after planting but before weeds or soybeans emerge.

Sharda Metolachlor 86.4EC + Sonalan - Soybeans

Do not use on muck or peat with >20% organic matter.

SOIL TEXTURE	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Sonalan
<3% Organic Matter Coarse Medium* Fine	1.0 - 1.33 pts. + 1.25 - 2.0 pts. 1.33 - 1.67 pts. + 1.75 - 2.50 pts. 1.33 - 1.67 pts. + 2.25 - 3.0 pts.
>3% Organic Matter Coarse Medium* Fine	1.33 pts. + 1.25 - 2.0 pts. 1.33 - 1.67 pts. + 1.75 - 2.50 pts. 1.67 - 2.0 pts. + 2.25 - 3.0 pts.

*For eastern black nightshade on these soils, apply Sonalan at 3 pts./A on medium- and 3.5 pts./A on fine textured soils, and follow with 2 incorporation passes.

Follow all use directions, limitations, restrictions, precautions, and information regarding application to soybeans on the **Sharda Metolachlor 86.4EC** and Sonalan labels.

Tank Mixture with Pursuit

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Pursuit alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Pursuit label for weeds controlled by Pursuit. Refer to the Pursuit label for geographical locations where this tank mixture may be applied.

Apply **Sharda Metolachlor 86.4EC** + Pursuit early pre-plant, pre-plant incorporated, or pre-emergence after planting using rates in the **Sharda Metolachlor 86.4EC + Pursuit-Soybeans** table. Application can be made in water or liquid fertilizer. Follow all use directions under Soil Applications on the Pursuit label. For early pre-plant and pre-plant incorporated applications, apply within 30 days before planting.

Note: Follow all use directions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and Pursuit labels.

Sharda Metolachlor 86.4EC + Pursuit-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Pursuit
<3% Organic Matter Coarse Medium Fine	0.85 pt. + 0.25 pt. 1.0 pt. + 0.25 pt. 1.33 pts. + 0.25 pt.
>3% Organic Matter Coarse	1.0 pts. + 0.25 pt.

Medium Fine	1.33 pts. + 0.25 pt. 1.33 - 1.67 pts. + 0.25 pt.
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Sequential: Apply Sharda Metolachlor 86.4EC early pre-plant, pre-plant incorporated, or pre-emergence after planting at 0.85 pt./A on coarse soils and 1.0 pt./A on medium- and fine-textured soils. Follow with a sequential post-emergence application of Pursuit to control emerged weeds according to the Pursuit label. Sharda Metolachlor 86.4EC will improve the consistency and level of control from Pursuit on most grass species. Refer to the Pursuit post-emergence label for a listing of weeds controlled, application rate, and growth stage limitations.

Tank Mixture with Lexone, Sencor, Scepter, Lorox, Lorox Plus, Gemini, Canopy, Preview, or Pursuit, plus Gramoxone Extra or Roundup for Minimum-Tillage or No-Tillage Systems

In minimum-tillage or no-tillage systems where soybeans are planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Extra or Roundup may be added to a tank mix of either Sharda Metolachlor 86.4EC + Sencor or Lexone, Sharda Metolachlor 86.4EC + Scepter, Sharda Metolachlor 86.4EC + Lorox, Sharda Metolachlor 86.4EC + Lorox Plus, Sharda Metolachlor 86.4EC + Gemini, Sharda Metolachlor 86.4EC + Canopy, Sharda Metolachlor 86.4EC + Preview, or Sharda Metolachlor 86.4EC + Pursuit. When used as directed, the Gramoxone Extra portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds. Roundup combinations will control emerged annual and perennial weeds when applied as directed on the Roundup label. The Sharda Metolachlor 86.4EC + Sencor / Lexone, Scepter, Lorox, Lorox Plus, Gemini, Canopy, Preview, or Pursuit portion of the tank mixture provides pre-emergence control of the weeds listed on this label in the tank mixture section for Sharda Metolachlor 86.4EC + Sencor / Lexone, Sharda Metolachlor 86.4EC + Scepter, Sharda Metolachlor 86.4EC + Lorox, Sharda Metolachlor 86.4EC + Lorox Plus, Sharda Metolachlor 86.4EC + Gemini, Sharda Metolachlor 86.4EC + Canopy, Sharda Metolachlor 86.4EC + Preview, and Sharda Metolachlor 86.4EC + Pursuit, respectively.

Refer to the label of each product used in combination and observe the planting details, soybean variety restrictions, information regarding application to soybeans, geographical restrictions, and all other precautions and limitations. Refer below for rates of Gramoxone Extra or Roundup, Sharda Metolachlor 86.4EC + Sencor / Lexone, Sharda Metolachlor 86.4EC + Scepter, Sharda Metolachlor 86.4EC + Lorox, Sharda Metolachlor 86.4EC + Lorox Plus, Sharda Metolachlor 86.4EC + Gemini, Sharda Metolachlor 86.4EC + Canopy, Sharda Metolachlor 86.4EC + Preview, and Sharda Metolachlor 86.4EC + Pursuit, respectively.

Application: Apply before, during, or after planting, but before the soybeans emerge, at the rates specified below. Add Gramoxone Extra or Roundup at the following broadcast rates:

Gramoxone Extra:

Weeds 1-3": 1.5-2 pts./A

Weeds 3-6": 2-2.5 pts./A

Weeds 6": 2.5-3 pts./A

Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50-74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6".

Restriction: Do not apply combinations containing Gramoxone Extra in suspension type liquid fertilizers as the activity of paraquat will be reduced.

Roundup: See the Roundup or Roundup RT label for weeds controlled, rates, and other use directions. Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.

Sharda Metolachlor 86.4EC + Lexone / Sencor + Gramoxone Extra or Roundup

Loamy sand >2% organic matter: Apply 1.0 pt. / A of Sharda Metolachlor 86.4EC + 0.33 - 0.5 lb./A of Sencor or Lexone DF.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 0.5-0.67 lb./A of Sencor or Lexone DF.

Fine soils: Apply 1.33 - 1.67 pts./A of Sharda Metolachlor 86.4EC + 0.67 lb./A of Sencor or Lexone DF.

When using Sencor 4 or Lexone 4L, multiply lbs. of DF by 1.5 to get pts./A.

If heavy rain occurs soon after application, crop injury may result, especially in poorly drained areas where water stands for several days or where the seeding slit has not been properly closed.

Restriction:

- Do not use this tank mixture on soil with <0.5% organic matter, on alkaline soil with a pH >7.4, or on all sand and loamy sand with <2% organic matter.

Sharda Metolachlor 86.4EC + Scepter + Gramoxone Extra or Roundup

Coarse soils: Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 0.67 pt./A of Scepter.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 0.67 pt./A of Scepter.

Fine soils: Apply 1.67 pts. /A of Sharda Metolachlor 86.4EC + 0.67 pt./A of Scepter.

Restrictions:

- Do not apply within 90 days of harvest.

- Do not graze or feed treated soybean forage, hay, or straw to livestock.

Sharda Metolachlor 86.4EC + Lorox + Gramoxone Extra or Roundup

Coarse soils: Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 1-1.5 lbs./A of Lorox DF**.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 1-2 lbs./A of Lorox DF.

Fine soils: Apply 1.33-1.67 pts./A of Sharda Metolachlor 86.4EC + 2-3 lbs./A of Lorox DF.

Restrictions:

- Do not use on soil with <0.5% organic matter.
- Do not use on loamy sand except in the northeastern U.S.
- Do not use loamy sand with >1% organic matter.
- Do not use on sand, gravelly soils, or exposed subsoils.

**When using Lorox L or Lorox DF, use equivalent rates. One pt. of Lorox L equals 1.0 lb. of Lorox DF.

Sharda Metolachlor 86.4EC + Lorox Plus + Gramoxone Extra or Roundup

Use only soils with 0.5-3% organic matter. Do not apply to sand or to any soil with pH >6.8.

Coarse soils: Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 12-14 oz./A of Lorox Plus 60DF.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 14-16 oz./A of Lorox Plus.

Fine soils: Apply 1.33-1.67 pts./A of Sharda Metolachlor 86.4EC + 16-18 oz./A of Lorox Plus.

Sharda Metolachlor 86.4EC + Gemini + Gramoxone Extra or Roundup

Use only where soils have 0.5-3% organic matter. Do not apply to sand or loamy sand, or to any soil <0.5% organic matter, or to any soil with pH >7.0, except as specified on the Gemini label.

Coarse soils (sandy loam only): Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 12-16 oz./A of Gemini 60DF.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 16-20 oz./A of Gemini.

Fine soils: Apply 1.33-1.67 pts./A of Sharda Metolachlor 86.4EC + 20-24 oz./A of Gemini.

Sharda Metolachlor 86.4EC + Canopy + Gramoxone Extra or Roundup

Use only where soils have 0.5-5% organic matter. Do not apply to sand, or to any soil with <0.5% organic matter, or to any soil with pH >7.0, except as specified on the Canopy label. Refer to the Canopy label for appropriate rate according to geographical location, soil and organic matter classification, pH limitations, and all other use directions.

Coarse soils (except sand): Apply 1.0 pt./A of Sharda Metolachlor 86.4EC.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC.

Fine soils: Apply 1.33-1.67 pts./A of Sharda Metolachlor 86.4EC.

Sharda Metolachlor 86.4EC + Preview + Gramoxone Extra or Roundup

Use only where soils have 0.5-5% organic matter. Do not apply to sand, or to any soil with <0.5% organic matter, or to any soil with pH >6.8.

Coarse soils (except sand): Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 6* - 7 oz./A of Preview 75DF.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 7* - 8 oz./A of Preview.

Fine soils: Apply 1.33-1.67 pts./A of Sharda Metolachlor 86.4EC + 8* to 9 - 10 oz./A of Preview.

*Use this rate where the soil organic matter is 0.5-3.0% range.

Sharda Metolachlor 86.4EC + Pursuit + Gramoxone Extra or Roundup

Coarse soils: Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 0.25 pt./A of Pursuit.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 0.25 pt./A of Pursuit.

Fine soils: Apply 1.67 pts./A of Sharda Metolachlor 86.4EC + 0.25 pt./A of Pursuit.

Post-Emergence Applications

Tank Mixture with Glyphosate Products

Sharda Metolachlor 86.4EC at 1.0-1.33 pts./A may be tank mixed with glyphosate products at labeled rates and applied from emergence up through the 3rd - 5th trifoliate leaf stage of Roundup Ready or glyphosate-tolerant soybeans. Sharda Metolachlor 86.4EC alone will not control emerged weeds. Use this treatment only on soybeans designated for use with glyphosate (e.g., Roundup Ready or glyphosate-tolerant soybeans). The glyphosate product must be registered for post-emergence use in Roundup Ready or glyphosate-tolerant soybeans.

Tank Mixture with Glufosinate Ammonium (Liberty) Products

Sharda Metolachlor 86.4EC at 1.0-1.33 pts./A may be tank mixed with glufosinate products at labeled rates and applied from emergence up through the 3rd - 5th trifoliate leaf stage of soybeans. Sharda Metolachlor 86.4EC alone will not control emerged

weeds. Use this treatment only on soybeans designated for use with glufosinate (e.g., Liberty Link). The use of adjuvants such as COC or UAN with **Sharda Metolachlor 86.4EC** may result in temporary crop injury.

Restrictions:

- Do not apply more than 1.33 pts./A post-emergence.
- Do not graze or feed treated forage or hay from soybeans to livestock following a post-emergence application.

Follow the tank mix product label for adjuvant instructions. Make post-emergence application at least 90 days before harvest.

TOMATOES

Transplanted Tomatoes: **Sharda Metolachlor 86.4EC** may be applied pre-plant incorporated or pre-plant before transplanting. If the latter method is used, keep soil disturbance to a minimum during transplanting. Application may also be made post-directed to transplants after the first settling rain or irrigation. When an application is made post-directed, apply in a minimum of 20 gallons of water per acre and minimum contact with tomato plants. **Sharda Metolachlor 86.4EC** will not control emerged weeds. In bedded transplanted tomatoes, apply **Sharda Metolachlor 86.4EC** pre-plant non-incorporated to the top of the pressed bed, as the last step, prior to laying plastic. **Sharda Metolachlor 86.4EC** may also be used to treat row-middles in bedded tomatoes, as long as the total amount of **Sharda Metolachlor 86.4EC** does not exceed the maximum allowed per crop.

Seeded Tomatoes: **Sharda Metolachlor 86.4EC** may be applied post-directed to direct seeded tomatoes. Tomato plants must be at least 4" tall at the time of application and the product must be applied in a minimum of 20 gallons of water per acre. Minimize spray contact with tomato plants. **Sharda Metolachlor 86.4EC** will not control emerged weeds.

Tomato Use Rates:

Coarse soils: Apply **Sharda Metolachlor 86.4EC** at 1.0-1.33 pts./A if organic matter content is <3% or 1.33 pts./A if the organic matter is >3%.

Medium soils: Apply **Sharda Metolachlor 86.4EC** at 1.33-1.67 pts./A.

Fine soils: Apply **Sharda Metolachlor 86.4EC** at 1.33-1.67 pts./A if organic matter content is <3% or 1.67-2.0 pts./A if the organic matter content is >3%. Apply by ground application only.

Precautions:

- **Sharda Metolachlor 86.4EC** may damage transplants that have been weakened by any cause. To prevent damage, plant only healthy transplants.
- In transplanted tomatoes, if **Sharda Metolachlor 86.4EC** is applied pre-plant incorporated, incorporate to a depth less than the depth of transplanting, and use the lower rate within the specified rate range for the given soil type, or damage may occur.
- For row middle applications where tomatoes are grown on sandy soils and where high soil moisture conditions can exist (i.e. low binding and high evaporation conditions), as may be found in the States of Florida, Georgia, Maryland, and Virginia, there is potential for crop injury in the form of leaf epinasty. The risk of this type of injury can be reduced by:
 - Incorporating the **Sharda Metolachlor 86.4EC** immediately following application.
 - Applying the **Sharda Metolachlor 86.4EC** seven or more days before transplanting (but only after the beds have been formed).
 - Minimizing the application of **Sharda Metolachlor 86.4EC** onto the plastic of the bed
 - Any combination of the above.

Restrictions:

- Do not apply **Sharda Metolachlor 86.4EC** within 90 days of tomato harvest.
- Do not exceed the maximum label rate for the soil texture per year.
- Do not apply more than 1 post-emergence application per year.
- Do not apply to varieties or cultivars with unknown tolerance to **Sharda Metolachlor 86.4EC**.
- Do not plant when wet, cool, or unfavorable growing conditions exist.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Storage: Keep from freezing: DO NOT store below 32°F.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA region office for guidance.

Container Handling:

NONREFILLABLE CONTAINER (EQUAL TO OR LESS THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available.

NONREFILLABLE CONTAINER (GREATER THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring

at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available.

REFILLABLE CONTAINER: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Bottom Discharge IBC (e.g., Schuetz Caged IBC or Snyder Square Stackable). Pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To pressure rinse the container before final disposal, empty the remaining contents from the IBC into application equipment or mix tank. Raise the bottom of the IBC by 1.5 inches on the side which is opposite of the bottom discharge valve to promote more complete product removal. Completely pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve.

Top Discharge IBC, Drums, Kegs (e.g. Snyder 120 Next Gen, Bonar B120, Drums and Kegs).

Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To triple rinse the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Rinse all interior surfaces. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Sharda USA LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Sharda USA LLC and Seller harmless for any claims relating to such factors.

Sharda USA LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or Sharda USA LLC and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, Sharda USA LLC, MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, neither Sharda USA LLC nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SHARDA USA LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SHARDA USA LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

Sharda USA LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Sharda USA LLC.

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Sencor is a trademark of Bayer Corporation.

Solubor is a trademark of U.S. Borax & Chemical Corp.

Authority and Command is a trademark of FMC Corporation.

Pioneer is a registered trademark of Agco Corporation.

Samek, Karen

From: Cheryl Wagner <cheryl@wagnerreg.com>
Sent: Monday, July 18, 2016 2:32 PM
To: Samek, Karen
Cc: Montague, Kathryn V.; Kt Woodall
Subject: Sharda Metolachlor Labels
Attachments: 83529-000XX.20160229.V6.clean.pdf; 83529-000XX.20160229.V4.clean.pdf

Resubmission #4

Hi Karen,

Per our telephone discussion today, I've deleted the reference to clover and alfalfa in the Rotational Crops section of the label.

Please let us know what additional changes need to be made.

Thank you.

Regards,

Cheryl Wagner

Wagner Regulatory Associates, Inc.

Telephone: (302) 635-7289

Fax: (302) 635-7295

Inert ingredient information may be entitled to confidential treatment

Samek, Karen

From: Kt Woodall <ktwoodall@wagnerreg.com>
Sent: Monday, July 18, 2016 12:55 PM *re submission #3*
To: Samek, Karen
Cc: Cheryl Wagner
Subject: RE: Metolachlor 84.4EC-D, 83529-LT
Attachments: 83529-000XX.20160229.V3.clean.pdf, 83529-000XX.20160229.V3.highlighted.pdf

Hi Karen – Please see the attached for 83529-LT.

Kt Woodall

Wagner Regulatory Associates, Inc.
7217 Lancaster Pike, Suite A
Hockessin, DE 19707
KtWoodall@wagnerreg.com

From: Samek, Karen [<mailto:Samek.Karen@epa.gov>]
Sent: Monday, July 18, 2016 11:24 AM *Deficiency #3*
To: Cheryl Wagner <cheryl@wagnerreg.com>
Cc: Montague, Kathryn V. <Montague.Kathryn@epa.gov>; James Wagner <jmw@wagnerreg.com>
Subject: Re: Metolachlor 86.4EC, 83529-LA

Hi Cheryl,

Attached are a few edits for 83529-LT and one more edit for 83529-LA (see page 10). Please let me know if you have any questions.

Thanks,
Karen

From: Cheryl Wagner <cheryl@wagnerreg.com>
Sent: Friday, July 8, 2016 10:40 AM
To: Samek, Karen
Cc: Montague, Kathryn V.; James Wagner
Subject: Metolachlor 86.4EC, 83529-LA

Good morning Karen,

We have determined a way forward for Sharda's Metolachlor registrations and would like to have two products:

Metolachlor 86.4EC, 83529-LA, will list all crops EXCEPT corn
Metolachlor 84.4EC-D, 83529-LT [REDACTED] will list corn exclusively

Attached is the revised Metolachlor 86.4EC, 83529-LA with directions for use for corn removed—I have attached clean and highlighted versions.

I will submit a revised Metolachlor [REDACTED] label in separate email.

Thanks for all your help!!

Regards,

Cheryl Wagner

Wagner Regulatory Associates, Inc.

Telephone: (302) 635-7289

Fax: (302) 635-7295

Samek, Karen

From: Montague, Kathryn V.
Sent: Wednesday, July 13, 2016 1:32 PM
To: Cheryl Wagner
Cc: Samek, Karen; Seema; ashish bubna (sanjay); export1@shardaintl.com; Roy Lee Carter; Sharon Gunning; Don Rossi; James Wagner
Subject: RE: Metolachlor End-Use products, EPA File Symbols 83529-LA & 83529-Lt

Hi, Cheryl,

That is fine, it can be in both locations. Our concern is that the First Aid is visible on the outside of the container when the container is on the shelf or being handled/used, without the user having to pull out or open a booklet to find it.

Thank you,
Kay

From: Cheryl Wagner [mailto:cheryl@wagnerreg.com]
Sent: Wednesday, July 13, 2016 12:06 PM
To: Montague, Kathryn V. <Montague.Kathryn@epa.gov>
Cc: Samek, Karen <Samek.Karen@epa.gov>; Seema <regn@shardaintl.com>; ashish bubna (sanjay) <purchase@shardaintl.com>; export1@shardaintl.com; Roy Lee Carter <royleecarter@shardaintl.com>; Sharon Gunning <sgunning@shardaintl.com>; Don Rossi <drossi@shardaintl.com>; James Wagner <jmw@wagnerreg.com>
Subject: Metolachlor End-Use products, EPA File Symbols 83529-LA & 83529-Lt

Dear Ms. Montague,

As a follow up to my telephone discussion with Karen Samek this morning, Sharda USA LLC respectfully acknowledges that the FIRST AID box must appear on a panel of the container label that is permanently affixed to the container. Sharda USA LLC acknowledges that if a booklet is created that contains all of the precautionary language and directions for use, the First Aid box will also be included in the booklet.

It is understood that the FIRST AID box will appear 1) On a panel on the container label that is permanently affixed to the container and 2) Inside the booklet that includes the complete directions for use.

Please advise if this is acceptable to move these applications to approval.

Thank you.

Regards,

Cheryl Wagner

Wagner Regulatory Associates, Inc.

Telephone: (302) 635-7289

Fax: (302) 635-7295

Hi Cheryl,

One more issue to clear up. For the First Aid section, The First Aid section needs to be on one of the panels of the label. (40 CFR 156.68). It can be additionally placed in the booklet but it can't be in the booklet in lieu of being on one of the panels. Please provide an e-mail for the record that this is understood. Alternatively, the "First Aid" text can be removed from the reference to the booklet on page one of the label. Please let me know if you have any questions.

Thanks,
Karen

Samek, Karen

From: Kt Woodall <ktwoodall@wagnerreg.com>
Sent: Tuesday, July 12, 2016 3:55 PM *Resubmission #2*
To: Samek, Karen
Cc: Cheryl Wagner
Subject: RE: Metolachlor 86.4EC, 83529-LA
Attachments: 83529-000XX.20160229.V4.clean.pdf; 83529-000XX.20160229.V4.highlighted.pdf

Goof afternoon Karen – Please see the attached.

Kt Woodall

Wagner Regulatory Associates, Inc.
7217 Lancaster Pike, Suite A
Hockessin, DE 19707
KtWoodall@wagnerreg.com

From: Samek, Karen [<mailto:Samek.Karen@epa.gov>]
Sent: Tuesday, July 12, 2016 3:08 PM
To: Cheryl Wagner <cheryl@wagnerreg.com>
Cc: Montague, Kathryn V. <Montague.Kathryn@epa.gov>
Subject: RE: Metolachlor 86.4EC, 83529-LA

Hi Cheryl,

Just a couple more edits and then I think we are good to go on this one. On pages 3 and 6 there are a couple of references to applying this product to corn which should be deleted since you are taking corn off the label. Please see the attached edits.

Thanks,
Karen

Karen Samek
Registration Division
Samek.karen@epa.gov
(703) 347-8825

From: Cheryl Wagner [<mailto:cheryl@wagnerreg.com>]
Sent: Friday, July 08, 2016 10:41 AM
To: Samek, Karen <Samek.Karen@epa.gov>
Cc: Montague, Kathryn V. <Montague.Kathryn@epa.gov>; James Wagner <jmw@wagnerreg.com>
Subject: Metolachlor 86.4EC, 83529-LA

Good morning Karen,

We have determined a way forward for Sharda's Metolachlor registrations and would like to have two products:

Metolachlor 86.4EC, 83529-LA, will list all crops EXCEPT corn
Metolachlor 84.4EC-D, 83529-Lt [REDACTED] will list corn exclusively

Inert ingredient information may be entitled to confidential treatment

Attached is the revised Metolachlor 86.4EC, 83529-LA with directions for use for corn removed—I have attached clean and highlighted versions.

I will submit a revised Metolachlor [REDACTED] label in separate email.

Thanks for all your help!!

Regards,

Cheryl Wagner

Wagner Regulatory Associates, Inc.

Telephone: (302) 635-7289

Fax: (302) 635-7295

Samek, Karen

From: Samek, Karen
Sent: Tuesday, July 12, 2016 3:08 PM *Deficiency #2*
To: 'Cheryl Wagner'
Cc: Kathryn Montague
Subject: RE: Metolachlor 86.4EC, 83529-LA
Attachments: V3-83529-000XX.20160229.V3.clean.pdf

Hi Cheryl,

Just a couple more edits and then I think we are good to go on this one. On pages 3 and 6 there are a couple of references to applying this product to corn which should be deleted since you are taking corn off the label. Please see the attached edits.

Thanks,
Karen

Karen Samek
Registration Division
Samek.karen@epa.gov
(703) 347-8825

From: Cheryl Wagner [mailto:cheryl@wagnerreg.com]
Sent: Friday, July 08, 2016 10:41 AM
To: Samek, Karen <Samek.Karen@epa.gov>
Cc: Montague, Kathryn V. <Montague.Kathryn@epa.gov>; James Wagner <jmw@wagnerreg.com>
Subject: Metolachlor 86.4EC, 83529-LA

Good morning Karen,

We have determined a way forward for Sharda's Metolachlor registrations and would like to have two products:

Metolachlor 86.4EC, 83529-LA, will list all crops EXCEPT corn
Metolachlor 84.4EC-D, 83529-Lt [REDACTED] will list corn exclusively

Attached is the revised Metolachlor 86.4EC, 83529-LA with directions for use for corn removed—I have attached clean and highlighted versions.

I will submit a revised Metolachlor [REDACTED] label in separate email.

Thanks for all your help!!

Regards,

Cheryl Wagner

Wagner Regulatory Associates, Inc.
Telephone: (302) 635-7289
Fax: (302) 635-7295

FEE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION
OFFICE OF PESTICIDE PROGRAMS REGISTRATION DIVISION (7505P)

BARCODE No.: D 434545 FILE SYMBOL No: 83529-LA PRODUCT NAME: Sharda Metolachlor 86.4EC;
DECISION No.: 514573; PC Code(s):108801; ACTION CODE: R300; FOOD Use: Yes

~~This Document Contains Confidential Information~~

DATE OUT: July 7, 2016

SUBJECT: End Use Product Chemistry Review
Product Name: Sharda Metolachlor 86.4EC

FROM: Indira Gairola / Product Chemistry Team (d) 07/08/16
CITAB/RD (7505P) SGBm 7-12-16

TO: Karen Samek / Kathryn Montague RM 23
Herbicide Branch / RD (7505P)

COMPANY: Sharda USA LLC

INTRODUCTION:

As per CITAB / Chemistry Team recommendation the registrant has submitted Guideline: 830.1800 Validated Enforcement Analytical Method for the registration of the new end use product "Sharda Metolachlor 86.4EC". Applicant has submitted MRID # 498315-04 for the Validated Enforcement Analytical Method. All the other product chemistry data was reviewed and determined acceptable. Details are listed in product chemistry review dated 04/15/16.
CITAB has been asked to determine acceptability of the data submitted.

SUMMARY OF FINDINGS:

1. Name of Active Ingredient(s) Metolachlor (86.4%).

2. Has the registrant claimed substantial similarity to a registered product?

[x] Yes; [] No; [] NA; if yes give the registration number of the cited product.
EPA Reg.No.66222-86

3. All of the source materials of the active ingredient are derived from registered sources- [x] Yes [] No

4. All inert ingredients have been screened by CITAB (Inert Team) and found to be approved for the proposed label uses - [x] Yes; [] No.

BARCODE No.: D 434545 **FILE SYMBOL No:** 83529-LA **PRODUCT NAME:** Sharda Metolachlor 86.4EC;
DECISION No.: 514573; **PC Code(s):** 108801; **ACTION CODE:** R300; **FOOD Use:** Yes

5. Confidential Statement of Formula(s):

☒ Basic - Dated: 02/29/16
Re-submitted - Dated: ☒ NA

☐ Alternate CSFs-- Dated: ☒ NA

Alternate CSF(s) complies with 40CFR§152.43: ☐ Yes; ☐ No; ☒ NA

6. Product label

- a. Ingredient statement: Nominal concentration of AI listed on CSF(s) concurs with product label (PR Notice 91-2).

☒ Yes, if not, explain below:

Is the sub statement in compliance with PR Notice 97-6 (inert ingredient vs other ingredient)

☒ Yes; ☐ No; if not, explain below

Metallic equivalent: ☐ Yes ☒ NA;
Soluble arsenic: ☐ Yes ☒ NA
Isomeric ratios: ☐ Yes ☒ NA
Acid Equivalent: ☐ Yes ☒ NA; acid equivalent =

- b. Health related sub statements: Product contains?

Petroleum distillate at > 10%: ☐ Yes; ☐ No; ☒ NA
Methanol at > 4%: ☐ Yes; ☐ No; ☒ NA
Sodium nitrate/sodium nitrite ☐ Yes; ☐ No; ☒ NA

- c. Physical chemical hazard statement: Product label requires a statement per 40 CFR §156.78 for: flammability, explosive potential or electric insulator breakdown?

☒ Yes ☐ No

Is the sub statement in compliance with PR Notice 98-6 (Total Release Fogger)?

☐ Yes; ☐ No; ☒ NA; if not, explain below

- d. Label requires an additional Storage and Disposal statement: ☐ Yes ☒ No; if yes explain below:

BARCODE No.: D 434545 **FILE SYMBOL No:** 83529-LA **PRODUCT NAME:** Sharda Metolachlor 86.4EC;
DECISION No.: 514573 **PC Code(s):** 108801 **ACTION CODE:** R300; **FOOD Use:** Yes

7. **Group A: Product Chemistry Data**

CITAB's determination of the acceptability for the proposed product is listed in the tables below.

Guideline No.	Study Title	Data submitted		CITAB's Assessment of Data	MRID Nos.
		Yes	No		
830.1800	Enforcement analytical Method	X		Y	498315-04 Complete Validated Method was provided See note below.

A = Acceptance, N = Not Acceptable, G = Data Gap, W = Waiver Request, I = In Progress,
 NA = Not Applicable; U = Upgradeable.

1. If validation of analytical method is not provided, the data requirements should be "N" (Not Acceptable)

NOTE. Enforcement Analytical Method included linearity, accuracy, & specificity as recommended by the CITAB / Chemistry Team is determined acceptable.

BARCODE No.: D 434545 **FILE SYMBOL No:** 83529-LA **PRODUCT NAME:** Sharda Metolachlor 86.4EC;
DECISION No.: 514573; **PC Code(s):** 108801; **ACTION CODE:** R300; **FOOD Use:** Yes

CONCLUSIONS:

CITAB has reviewed the product chemistry data submitted/cited for the end-use product and has concluded that:

A. Substantial similarity to the cited product (Reg. No, 66222-86) from Product chemistry view point

- ☐ Similar
- ☒ Not similar, give reasons. The pH value and the inert ingredients are different
- ☐ Identical
- ☐ Not identical
- ☐ Not applicable

B. Confidential Statement of formula

1. Basic CSF (dated 02/29/15)
 - ☒ Acceptable
 - ☐ Not Acceptable
 - ☐ Not Applicable

If not acceptable provide the reasons

2. Alternate CSFs
 - ☐ Acceptable -
 - ☐ Not Acceptable -
 - ☒ Not Applicable

If not acceptable give reasons

C. Group A Product Chemistry Data

- ☒ Acceptable- Guideline(s): 830.1800 Enforcement Analytical method-Method submitted includes linearity, specificity and accuracy.
- ☐ Not acceptable
- ☐ Acceptable with the exception of
- ☐ Not required
- ☐ Data cited
- ☐ Data cited

D Product Label/Draft Label Yes ☒; No ☐ If yes, give recommendations below:-

1. Since the product was determined to react with oxidizing agents the registrant is recommended to add the following statement under the heading Physical and Chemical hazards on the label.
"Do not mix or allow coming in contact with oxidizing agents. Hazardous chemical reaction may occur".

Samek, Karen

From: Cheryl Wagner <cheryl@wagnerreg.com>
Sent: Friday, July 08, 2016 10:41 AM *Supersede*
To: Samek, Karen
Cc: Montague, Kathryn V.; James Wagner
Subject: Metolachlor 86.4EC, 83529-LA
Attachments: 83529-000XX.20160229.V3.highlighted.pdf; 83529-000XX.20160229.V3.clean.pdf

Good morning Karen,

We have determined a way forward for Sharda's Metolachlor registrations and would like to have two products:

Metolachlor 86.4EC, 83529-LA, will list all crops EXCEPT corn

Metolachlor 84.4EC-D, 83529-Lt [REDACTED] will list corn exclusively

Attached is the revised Metolachlor 86.4EC, 83529-LA with directions for use for corn removed—I have attached clean and highlighted versions.

I will submit a revised Metolachlor [REDACTED] label in separate email.

Thanks for all your help!!

Regards,

Cheryl Wagner

Wagner Regulatory Associates, Inc.

Telephone: (302) 635-7289

Fax: (302) 635-7295

Receipt for Section 3

S: 988742

Milestone Email: jmw@wagnerreg.com

Regulatory Type: Product Registration - Section 3

Resubmission: ☒ Yes ☐ No

Application Type: New Registration

Fee For Service: ☐ Yes ☒ No

Company: 83529 SHARDA USA LLC

Billable: ☐ Yes ☒ No



Print Letter

Enter More Information

Tracking

Risk Manager: Registration Division, Risk Management Team 23

Product #: 83529-LA Product Name: Sharda Metolachlor 06.4EC

Country:

☒ Me Too Section 3: 66222-86

Me Too Product Name: PARALLEL PCS

Application Date: 06-Jul-2016

OPP Rec'd Date: 06-Jul-2016

Front End Date: 06-Jul-2016

Risk Manager Send Date: 06-Jul-2016

FFS Due Date:

Negotiated Due Date:

OPP Target Date:

Fast Track: ☐

New Ingredient: ☐

Receipt Description:

Portal submission pkg. #12637. Data Deficiency. 75-Day Response. D-514573.

New Ingredient Request Date:

New Ingredient Received Date:

Form A: ☐

Signature Date:

Form B: ☐

Signature Date:

Receipt Content	De
Study	

View/Edit

Karen

Resub

JUL 12 2016

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

E-SUBMISSION

July 6th, 2016

Document Processing Desk
ATTN: Kathryn Montague (PM 23)
Registration Division (7505P)
U.S. Environmental Protection Agency
Office of Pesticide Programs
One Potomac Yard
2777 South Crystal Drive
Arlington, Virginia 22202



Re: Sharda Metolachlor 86.4EC (83529-LA) - Data Deficiency, 75-Day Response

Dear Ms. Montague:

Wagner Regulatory Associates, Inc., as agent for Sharda USA LLC, respectfully submits data in response to EPA 75-Day Letter dated June 14th, 2016. Enclosed are the following documents:

- Letter from Sharda USA LLC, appointing Wagner Regulatory Associates, Inc. as its agent
- Application for Pesticide Registration (8570-1)
- Formulator's Exemption Statement (8570-27)
- Certification Statement (8570-34)
- Data Matrix, EPA internal and public (8570-35)
- EPA Data Deficiency Letter dated June 14th, 2016
- Data report as listed in the Transmittal Document

If you have any questions about this submission please contact the undersigned at (302) 635-7289 or cheryl@wagnerreg.com.

Respectfully submitted,

Cheryl Wagner
Agent for Sharda USA LLC

Enclosures

DOCUMENTUM

DATA TRANSMITTAL DOCUMENT

1. **Name and Address of Submitter**

Sharda USA, LLC
c/o Wagner Regulatory Associates
PO Box 640
Hockessin, DE 19707

2. **Regulatory Action In Support Of Which This Package Is Submitted**

Application for Registration
Sharda Metolachlor 86.4EC
EPA File Symbol: 83529-LA

3. **Transmittal Date**

July 6, 2016

4. **List of Submitted Studies**

49962801	Metolachlor 84.4 % EC (with Dichlormid) – Enforcement analytical method OPPTS Guideline 830.1800
----------	--

Company Official:

Cheryl Wagner

Authorized Agent

Cheryl R. Wagner
Signature

Company Name: Sharda USA LLC

Company Contact:

Cheryl Wagner

Authorized Agent

(302) 635-7289

Phone

DOCUMENTUM

<div style="display: inline-block; text-align: center;"> United States Environmental Protection Agency Washington, DC 20460 </div>		<input type="checkbox"/>	Registration	OPP Identifier Number
		<input type="checkbox"/>	Amendment	
		<input checked="" type="checkbox"/>	Other	
Application for Pesticide - Section I				
1. Company/Product Number 83529-LA		2. EPA Product Manager Kathryn Montague		3. Proposed Classification <input checked="" type="checkbox"/> None Restricted
4. Company/Product (Name) Sharda USA LLC / Sharda Metolachlor 86.4EC		PM# 23		
5. Name and Address of Applicant (Include Zip Code) Sharda USA LLC c/o Wagner Regulatory Associates, Inc. P.O. Box 640 Hockessin, DE 19707 <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. Product Name:		
Section - II				
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Amendment - Explain below. <input type="checkbox"/> Resubmission in response to Agency letter dated _____ <input type="checkbox"/> Notification - Explain below. </div> <div style="width: 45%;"> <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ <input type="checkbox"/> "Me Too" Application. <input checked="" type="checkbox"/> Other - Explain below. </div> </div>				
Explanation: Use additional page(s) if necessary. (For Section I and Section II.) Response to 75-day deficiency letter, dated June 14th, 2016.				
Section - III				
1. Material This Product Will Be Packaged In:				
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes" Unit Packaging wgt. No. per container	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes" Package wgt No. per container	2. Type of Container <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) HDPE lined bags	
* Certification must be submitted				
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1, 2.5, 5 gallons		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product
6. Manner in Which Label is Affixed to Product <div style="display: flex; justify-content: space-between;"> <div style="width: 40%;"> <input type="checkbox"/> Lithograph <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled </div> <div style="width: 60%;"> <input type="checkbox"/> Other _____ adhesive backed label _____ </div> </div>				
Section - IV				
1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)				
Name Cheryl Wagner		Title Agent for Sharda USA, LLC		Telephone No. (Include Area Code) (302) 635-7239 Cheryl@wagnerreg.com
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.				6. Date Application Received (Stamp)
2. Signature 		3. Title Agent for Sharda USA LLC		
4. Typed Name Cheryl Wagner		5. Date July 6 th , 2016		

This is a reproduction of EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

Samek, Karen

From: Cheryl Wagner <cheryl@wagnerreg.com>
Sent: Wednesday, July 06, 2016 4:32 PM
To: Samek, Karen
Subject: RE: Label for 83529-LA
Attachments: 83529-000XX.20160229.V2.pdf

Resubmission #1

Hi Karen,

Here's the revised label for one of the Metolachlor products. Let me know what additional changes are needed.

Regards,

Cheryl Wagner

Wagner Regulatory Associates, Inc.
Telephone: (302) 635-7289
Fax: (302) 635-7295

From: Samek, Karen [mailto:Samek.Karen@epa.gov]
Sent: Wednesday, July 06, 2016 3:07 PM
To: Cheryl Wagner <cheryl@wagnerreg.com>
Cc: Montague, Kathryn V. <Montague.Kathryn@epa.gov>
Subject: RE: Label for 83529-LA

Hi Cheryl,

Attached are my edits for your new product 83529-LA for your consideration. Please let me know if you have any questions.

Thanks,
Karen

Karen Samek
Registration Division
Samek.karen@epa.gov
(703) 347-8825

From: Cheryl Wagner [mailto:cheryl@wagnerreg.com]
Sent: Wednesday, July 06, 2016 10:49 AM
To: Samek, Karen <Samek.Karen@epa.gov>
Cc: Montague, Kathryn V. <Montague.Kathryn@epa.gov>
Subject: RE: Label for 83529-LT

Hi Karen,

We are making the label changes and will get a revised label to you shortly.

Inert ingredient information may be entitled to confidential treatment

[REDACTED]—am checking with Sharda as to what they want to do and will get back to you.

Regards,

Cheryl Wagner

Wagner Regulatory Associates, Inc.

Telephone: (302) 635-7289

Fax: (302) 635-7295

From: Samek, Karen [<mailto:Samek.Karen@epa.gov>]
Sent: Wednesday, July 06, 2016 10:29 AM
To: Cheryl Wagner <cheryl@wagnerreg.com>
Cc: Montague, Kathryn V. <Montague.Kathryn@epa.gov>
Subject: RE: Label for 83529-LT

Hi Cheryl,

I'm finishing up the label reviews of your two metolachlor products and want to get my comments to you today. I'm attaching my comments for 83529-LT for your consideration. [REDACTED]
Please give me a call when you can at 703-347-8825.

Thanks,
Karen

Karen Samek
Registration Division
Samek.karen@epa.gov
(703) 347-8825

From: Cheryl Wagner [<mailto:cheryl@wagnerreg.com>]
Sent: Tuesday, July 05, 2016 2:48 PM
To: Samek, Karen <Samek.Karen@epa.gov>
Cc: James Wagner <jmw@wagnerreg.com>; Anna Armstrong <Anna@wagnerreg.com>; Montague, Kathryn V. <Montague.Kathryn@epa.gov>
Subject: RE: 75-day letter for 83529-LT and 83529-LA

Hello Karen,

Attached is the report for Guideline 830.1800 for the pending metolachlor products—83529-LT and 83529-LA.

I will submit this report through CDX today/tomorrow morning. I wanted to get the report to you as soon as possible for forwarding to the EPA reviewer.

Karen, please note that this report will satisfy the data requirement for both applications. I will provide you with complete packages for this report once we prepare the packages for CDX.

Regards,

Cheryl Wagner

Wagner Regulatory Associates, Inc.

Telephone: (302) 635-7289

Fax: (302) 635-7295

From: Cheryl Wagner

Sent: Thursday, June 16, 2016 11:38 AM

To: Anna Armstrong <Anna@wagnerreg.com>

Subject: FW: 75-day letter for 83529-LT and 83529-LA

Sharda Metolachlor letters

From: Samek, Karen [<mailto:Samek.Karen@epa.gov>]

Sent: Thursday, June 16, 2016 11:24 AM

To: Cheryl Wagner <cheryl@wagnerreg.com>

Cc: James Wagner <jmw@wagnerreg.com>; Montague, Kathryn V. <Montague.Kathryn@epa.gov>

Subject: 75-day letter for 83529-LT and 83529-LA

Cheryl/Jim,

Attached are the 75-day deficiency letters for your new products 83529-LA and 83529-LT indicating that additional data are required for Guideline 830.1800 . Please acknowledge receipt of this e-mail. If you have any questions please let me know.

Thanks,

Karen

Karen Samek

Registration Division

Samek.karen@epa.gov

(703) 347-8825

Samek, Karen

From: Samek, Karen
Sent: Wednesday, July 06, 2016 3:07 PM - *affirm #1*
To: 'Cheryl Wagner'
Cc: Kathryn Montague
Subject: RE: Label for 83529-LA
Attachments: 83529-000XX.20160229.V1.pdf

Hi Cheryl,

Attached are my edits for your new product 83529-LA for your consideration. Please let me know if you have any questions.


Thanks,
Karen

Karen Samek
Registration Division
Samek.karen@epa.gov
(703) 347-8825

From: Cheryl Wagner [<mailto:cheryl@wagnerreg.com>]
Sent: Wednesday, July 06, 2016 10:49 AM
To: Samek, Karen <Samek.Karen@epa.gov>
Cc: Montague, Kathryn V. <Montague.Kathryn@epa.gov>
Subject: RE: Label for 83529-LT

Hi Karen,

We are making the label changes and will get a revised label to you shortly.

—am checking with Sharda as to what they want to do and will get back to you.

Regards,

Cheryl Wagner
Wagner Regulatory Associates, Inc.
Telephone: (302) 635-7289
Fax: (302) 635-7295

From: Samek, Karen [<mailto:Samek.Karen@epa.gov>]
Sent: Wednesday, July 06, 2016 10:29 AM
To: Cheryl Wagner <cheryl@wagnerreg.com>
Cc: Montague, Kathryn V. <Montague.Kathryn@epa.gov>
Subject: RE: Label for 83529-LT

Hi Cheryl,

I'm finishing up the label reviews of your two metolachlor products and want to get my comments to you today. I'm attaching my comments for 83529-LT for your consideration. [REDACTED]
Please give me a call when you can at 703-347-8825.

Thanks,
Karen

Karen Samek
Registration Division
Samek.karen@epa.gov
(703) 347-8825

From: Cheryl Wagner [<mailto:cheryl@wagnerreg.com>]
Sent: Tuesday, July 05, 2016 2:48 PM
To: Samek, Karen <Samek.Karen@epa.gov>
Cc: James Wagner <jmw@wagnerreg.com>; Anna Armstrong <Anna@wagnerreg.com>; Montague, Kathryn V. <Montague.Kathryn@epa.gov>
Subject: RE: 75-day letter for 83529-LT and 83529-LA

Hello Karen,

Attached is the report for Guideline 830.1800 for the pending metolachlor products—83529-LT and 83529-LA.

I will submit this report through CDX today/tomorrow morning. I wanted to get the report to you as soon as possible for forwarding to the EPA reviewer.

Karen, please note that this report will satisfy the data requirement for both applications. I will provide you with complete packages for this report once we prepare the packages for CDX.

Regards,

Cheryl Wagner
Wagner Regulatory Associates, Inc.
Telephone: (302) 635-7289
Fax: (302) 635-7295

From: Cheryl Wagner
Sent: Thursday, June 16, 2016 11:38 AM
To: Anna Armstrong <Anna@wagnerreg.com>
Subject: FW: 75-day letter for 83529-LT and 83529-LA

Sharda Metolachlor letters

From: Samek, Karen [<mailto:Samek.Karen@epa.gov>]

Sent: Thursday, June 16, 2016 11:24 AM

To: Cheryl Wagner <cheryl@wagnerreg.com>

Cc: James Wagner <jmw@wagnerreg.com>; Montague, Kathryn V. <Montague.Kathryn@epa.gov>

Subject: 75-day letter for 83529-LT and 83529-LA

Cheryl/Jim,

Attached are the 75-day deficiency letters for your new products 83529-LA and 83529-LT indicating that additional data are required for Guideline 830.1800 . Please acknowledge receipt of this e-mail. If you have any questions please let me know.

Thanks,
Karen

Karen Samek
Registration Division
Samek.karen@epa.gov
(703) 347-8825

Samek, Karen

From: Cheryl Wagner <cheryl@wagnerreg.com>
Sent: Tuesday, July 05, 2016 2:48 PM
To: Samek, Karen
Cc: James Wagner; Anna Armstrong; Montague, Kathryn V.
Subject: RE: 75-day letter for 83529-LT and 83529-LA
Attachments: 49831504 - Analytical Method with Validation.pdf

Hello Karen,

Attached is the report for Guideline 830.1800 for the pending metolachlor products—83529-LT and 83529-LA.

I will submit this report through CDX today/tomorrow morning. I wanted to get the report to you as soon as possible for forwarding to the EPA reviewer.

Karen, please note that this report will satisfy the data requirement for both applications. I will provide you with complete packages for this report once we prepare the packages for CDX.

Regards,

Cheryl Wagner

Wagner Regulatory Associates, Inc.

Telephone: (302) 635-7289

Fax: (302) 635-7295

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Sent: Thursday, June 16, 2016 11:38 AM
To: Anna Armstrong <Anna@wagnerreg.com>
Subject: FW: 75-day letter for 83529-LT and 83529-LA

Sharda Metolachlor letters

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Sent: Thursday, June 16, 2016 11:24 AM
To: Cheryl Wagner <cheryl@wagnerreg.com>
Cc: James Wagner <jmw@wagnerreg.com>; Montague, Kathryn V. <Montague.Kathryn@epa.gov>
Subject: 75-day letter for 83529-LT and 83529-LA

Cheryl/Jim,

Attached are the 75-day deficiency letters for your new products 83529-LA and 83529-LT indicating that additional data are required for Guideline 830.1800 . Please acknowledge receipt of this e-mail. If you have any questions please let me know.

Thanks,

Karen

Karen Samek
Registration Division
Samek.karen@epa.gov
(703) 347-8825



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Washington, D.C. 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

June 14, 2016

OPP Decision Number: D-514573

Registrant Name: Ms. Cheryl Wagner
Registrant Address: Sharda USA LLC
c/o Wagner Regulatory Associates, Inc
P.O. Box 640
Hockessin, DE 19707

Subject: Data Deficiency
Product Name: Sharda Metolachlor 86.4EC
EPA File Symbol: 83529-LA
Application Date: 02/29/2016
EPA Receipt Date: 02/29/2016

Dear Ms. Wagner:

The Agency has received and begun its in-depth review of the subject application and has determined that it is incomplete or that further information is needed. This letter is a written notification of those deficiencies and identifies your options under 40 CFR 152.105 and Section 33 of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended by the Pesticide Registration Improvement Extension Act (PRIA 3). Your options under 40 CFR 152.105 and section 33 of FIFRA are addressed separately because each involves a different timeframe and set of options for responding to this letter. Please ensure that you consider each of the sections below in determining how and when you respond to this letter.

40 CFR 152.105:

As previously described in a telephone conversation on 6/14/2016, pursuant to 40 CFR 152.105, you are allowed 75 days from the date of this letter ending **August 29, 2016**, to provide a response concerning the deficiencies listed in this letter. Your response may include making corrections or additions to complete the application, or notifying the Agency of the date on which you expect to complete the application, or withdrawing your application. If you do not respond to this letter within 75 days or if you respond with a date on which you expect to complete the application but fail to meet that scheduled date, the Agency will treat the application as if you had withdrawn it. Withdrawal concludes the Agency's review of your application. Any subsequent submission of the same application must then be submitted as a new application with a new deadline for EPA to make a determination on your application and subject to a new registration service fee.

The deficiencies identified in the Agency's review at this time are:

1. Guideline study 830.1800 Enforcement Analytical method was found unacceptable because a complete validated method was not provided. The method stated does not include linearity and specificity. These details are required.

Further review of your application and your response to the deficiencies may identify additional deficiencies and you will be so informed.

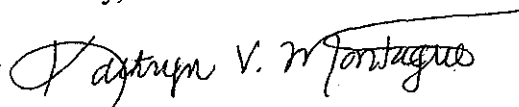
FIFRA Section 33/PRIA:

This application is also subject to a deadline for making a determination on the application under FIFRA Section 33, Pesticide Registration Service Fees, established under PRIA. The time frame for the Agency to make a determination on this application ends on July 22, 2016. Because the deadline for the agency to make a determination on this application expires before the end of the 75 days you have to respond to the deficiencies noted above, you have the following three options:

1. **Establish a new due date.** You may work with us to establish a new section 33/PRIA deadline that allows for an appropriate response to the 75 day letter. If you choose this option, you need to contact the Agency not later than June 30, 2016 to discuss a time frame that allows you to address the deficiencies listed above and the Agency to make a regulatory decision.
2. **Withdraw the application.** Alternatively, you may notify us not later than June 30, 2016, that you are withdrawing your application. **As noted above, withdrawal concludes the Agency's review** of your application; however, you may resubmit your application after the deficiencies have been addressed. Should you choose to resubmit your application, it would be subject to a new deadline for making a determination on your application and a new registration service fee - Since a fee was paid with this application, the Agency will provide any applicable refund as soon as practicable.
3. **Not respond.** If the Agency does not hear from you by **June 30, 2016**, the Agency in meeting its obligations under section 33/PRIA may issue a determination to not grant your application. While a determination to not grant an application would allow EPA to have met its obligation under section 33 of FIFRA to issue a determination by a specified date, this determination is neither a denial of the application pursuant to section 3(c)(6) of FIFRA or a withdrawal of the application. Thus, the Agency will continue to diligently work on any such application as long as EPA receives a response to a deficiency notice within the 75 days described above.

Please respond to this letter by June 30, 2016 by contacting Karen Samek at (703) 347-8825; samek.karen@epa.gov or Kathryn Montague at (703) 305-1243; montague.kathryn@epa.gov during the hours of 9:00 am to 5:00 pm EST with a response and for any questions concerning this letter. When submitting information or data in response to this letter, a copy of this letter should accompany the submission to facilitate processing.

Sincerely,



Kathryn Montague, Product Manager 23
Herbicide Branch
Registration Division (7505P)
Office of Pesticide Programs

Enclosure

Samek, Karen

From: Cheryl Wagner <cheryl@wagnerreg.com>
To: Samek, Karen
Sent: Thursday, June 16, 2016 11:36 AM
Subject: Read: 75-day letter for 83529-LT and 83529-LA

Your message

To:
Subject: 75-day letter for 83529-LT and 83529-LA
Sent: Thursday, June 16, 2016 3:59:55 PM (UTC) Monrovia, Reykjavik

was read on Thursday, June 16, 2016 3:35:51 PM (UTC) Monrovia, Reykjavik.

**FEE**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION
OFFICE OF PESTICIDE PROGRAMS REGISTRATION DIVISION (7505P)

BARCODE No.: D 432915 **FILE SYMBOL No.:** 83529-LA **PRODUCT NAME:** Sharda Metolachlor 86.4EC;
DECISION No.: 514573; **PC Code(s):** 108801; **ACTION CODE:** R300; **FOOD Use:** Yes

~~This Document Contains Confidential Information~~

DATE OUT: April 15, 2016

SUBJECT: End Use Product Chemistry Review
Product Name: Sharda Metolachlor 86.4EC

FROM: Indira Gairola / Product Chemistry Team
CITAB/RD (7505P)

TO: Karen Samek / Kathryn Montague RM 23
Herbicide Branch / RD (7505P)

COMPANY: Sharda USA LLC

INTRODUCTION:

The registrant has submitted an application for the registration of the new end use product "Sharda Metolachlor 86.4EC". In support of the registration application, the registrant is submitting 830 series group A and group B product chemistry data with MRID No's. 498314-01 to -03. Applicant has submitted a Basic CSF dated 02/29/16. Applicant claims the product to be similar to EPA Reg.No. 66222-86. CITAB has been asked to determine acceptability of the data submitted and the proposed CSF(s).

SUMMARY OF FINDINGS:

1. Name of Active Ingredient(s) Metolachlor (86.4%).

2. Has the registrant claimed substantial similarity to a registered product?

[x] Yes; [] No; [] NA; if yes give the registration number of the cited product.
EPA Reg.No.66222-86

3. All of the source materials of the active ingredient are derived from registered sources- [x] Yes [] No

4. All inert ingredients have been screened by CITAB (Inert Team) and found to be approved for the proposed label uses - [x] Yes; [] No.

BARCODE No.: D 432915 **FILE SYMBOL No:** 83529-LA **PRODUCT NAME:** Sharda Metolachlor 86.4EC;
DECISION No.: 514573; **PC Code(s):** 108801; **ACTION CODE:** R300; **FOOD Use:** Yes

5. Confidential Statement of Formula(s):

☒ Basic - Dated: 02/29/16
Re-submitted - Dated: ☒ NA

☐ Alternate CSFs— Dated: ☒ NA

Alternate CSF(s) complies with 40CFR§152.43: ☐ Yes; ☐ No; ☒ NA

6. Product label

- a. Ingredient statement: Nominal concentration of AI listed on CSF(s) concurs with product label (PR Notice 91-2).

☒ Yes, if not, explain below:

Is the sub statement in compliance with PR Notice 97-6 (inert ingredient vs other ingredient)

☒ Yes; ☐ No; if not, explain below

Metallic equivalent: ☐ Yes ☒ NA;
Soluble arsenic: ☐ Yes ☒ NA
Isomeric ratios: ☐ Yes ☒ NA
Acid Equivalent: ☐ Yes ☒ NA; acid equivalent =

- b. Health related sub statements: Product contains?

Petroleum distillate at > 10%: ☐ Yes; ☐ No; ☒ NA
Methanol at > 4%: ☐ Yes; ☐ No; ☒ NA
Sodium nitrate/sodium nitrite ☐ Yes; ☐ No; ☒ NA

- c. Physical chemical hazard statement: Product label requires a statement per 40 CFR §156.78 for: flammability, explosive potential or electric insulator breakdown?

☒ Yes ☐ No

Is the sub statement in compliance with PR Notice 98-6 (Total Release Fogger)?

☐ Yes; ☐ No; ☒ NA; if not, explain below

- d. Label requires an additional Storage and Disposal statement: ☐ Yes ☒ No; if yes explain below:

BARCODE No.: D 432915 **FILE SYMBOL No:** 83529-LA **PRODUCT NAME:** Sharda Metolachlor 86.4EC;
DECISION No.: 514573: **PC Code(s):** 108801: **ACTION CODE:** R300; **FOOD Use:** Yes

7. Group A: Product Chemistry Data

CITAB's determination of the acceptability for the proposed product is listed in the tables below.

Guideline No.	Study Title		Data submitted		CITAB's Assessment of Data	MRID Nos.
			Yes	No		
830.1550	Product Identity & Composition		x		A	498314-01
830.1600	Description of materials used to produce the product		x		A	498314-01
830.1650	Description of formulation process		x		A	498314-01
830.1670	Discussion on the formation of impurities		x		A	498314-01
830.1700	Preliminary analysis				NA	
830.1750	Certified limits (158.350)	Standard certified limits				CSF dated 02/29/16
		Proposed Limits				
		Justification for wider limits				
830.1800	Enforcement analytical method		x		N	Complete Validated method was not provided See note below

A = Acceptance, N = Not Acceptable, G = Data Gap, W = Waiver Request, I = In Progress, NA = Not Applicable; U = Upgradeable.

1. If validation of analytical method is not provided, the data requirements should be "N" (Not Acceptable)

. Enforcement analytical method-Method does not include linearity, specificity.

BARCODE No.: D 432915 **FILE SYMBOL No:** 83529-LA **PRODUCT NAME:** Sharda Metolachlor 86.4EC;
DECISION No.: 514573; **PC Code(s):** 108801; **ACTION CODE:** R300; **FOOD Use:** Yes

8. Group B:

Guideline No.	Study Title	Value or Qualitative Description	CITAB's Assessment of Data	MRID Nos.
830.6303	Physical State	liquid	A	498314-02
830.6314	Oxidation/Reduction	A temperature increase of 9 °C. was observed in 5% KMnO4	A	498314-02
830.6315	Flammability	>230 °F	A	498314-02
830.6316	Explodability	Does not contain explosive ingredients	NA	498314-02
830.7000	pH	5.24 (corrected to 25 °C)1% (w/w) solution	A	498314-02
830.7100	Viscosity	106 centipoise at 24 °C 44.5 centipoise at 39 °C	A	498314-02
830.7300	Density (units)	1.110 g/cm ³ (9.26 pounds/gallon) at 24 °C 1.090 g/cm ³ (9.10 pounds /gallon) at 39 °C20°C	A	498314-02
830.6317	Storage stability Or Accelerated storage stability	Accelerated storage stability showed acceptable recovery of active ingredient	A	498314-03
830.6320	Corrosion characteristics or Accelerated corrosion characteristics	No changes in the appearance or integrity of the test or reserve container were observed over the storage interval.	A	498314-03

A = Acceptance, N = Not Acceptable, G = Data Gap, W = Waiver request, NA = Not applicable, I = In progress; U = Upgradeable.

CONCLUSIONS:

CITAB has reviewed the product chemistry data submitted/cited for the end-use product and has concluded that:

A. Substantial similarity to the cited product (Reg. No, 66222-86) from Product chemistry view

BARCODE No.: D 432915 **FILE SYMBOL No:** 83529-LA **PRODUCT NAME:** Sharda Metolachlor 86.4EC;
DECISION No.: 514573; **PC Code(s):** 108801; **ACTION CODE:** R300; **FOOD Use:** Yes

point

- ☐ Similar
- ☒ Not similar, give reasons. The pH value and the inert ingredients are different
- ☐ Identical
- ☐ Not identical
- ☐ Not applicable

B. Confidential Statement of formula

1. Basic CSF (dated 02/29/15)

- ☒ Acceptable
- ☐ Not Acceptable
- ☐ Not Applicable

If not acceptable provide the reasons

2. Alternate CSFs

- ☐ Acceptable -
- ☐ Not Acceptable -
- ☒ Not Applicable

If not acceptable give reasons

C. Group A Product Chemistry Data

- ☐ Acceptable
- ☐ Not acceptable
- ☒ Acceptable with the exception of Guideline(s): 830.1800 Enforcement Analytical method-Method Stated does not include linearity, specificity and accuracy. These details are required
- ☐ Not required
- ☐ Data cited

D. Group B Product chemistry data

- ☒ Acceptable
- ☐ Not acceptable
- ☐ Acceptable with the exception of Guideline(s):
- ☐ Not required
- ☐ Data cited

A.

B. Product Label/Draft Label Yes [x]; No [] If yes, give recommendations below:-

1. Since the product was determined to react with oxidizing agents the registrant is recommended to add the following statement under the heading Physical and Chemical hazards on the label.
"Do not mix or allow coming in contact with oxidizing agents. Hazardous chemical reaction may occur".



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND
POLLUTION PREVENTION

OFFICE OF PESTICIDE PROGRAMS
REGISTRATION DIVISION

17/MAR/2016

SIMILARITY CLINIC MEMORANDUM

Subject: Name of Pesticide Product: Sharda Metolachlor 86.4EC
EPA Reg. No. /File Symbol: 83529-LA
DP Barcode: D432305
Decision No: 514573
Action Code: R300
PC Code: 108801 (metolachlor)

From: Eugenia McAndrew, Biologist *Eugenia McAndrew*
Through: John C. Redden, M.S., Senior Risk Assessor *JCR*
Chemistry, Inerts and Toxicology Assessment Branch
Registration Division (7505P)

To: Kathryn Montague, Risk Manager Team 23
Herbicide Branch
Registration Division (7505P)

Applicant: Sharda USA LLC
P.O. Box 640
Hockessin, DE 19707

FORMULATION FROM LABEL:

<u>Active Ingredient(s):</u>	<u>% by wt.</u>
Metolachlor	86.4
Other ingredients:	<u>13.6</u>
Total:	100.0

ACTION REQUESTED: Similarity determination for 83529-LA, proposed product, and 66222-86, cited product.

BACKGROUND: Sharda USA LLC has applied for registration of Sharda Metolachlor 86.4EC, EPA File Symbol 83529-LA, claiming to be substantially similar to Parallel PCS, EPA Reg. No. 66222-86. Both products contain 86.4% metolachlor. The submission includes a basic CSF dated February 19, 2016, label, data matrix and company letter.

The registrant is using the cite all method of data support to satisfy the acute toxicity data requirements. After searching the OPP electronic databases, we were unable to locate any acute toxicity data for 66222-86 or any memos written regarding the acute toxicity of this product.

RECOMMENDATIONS:

1. We compared the basic CSFs and labels of the proposed product, 83529-LA, and the cited product, 66222-86, and determined that the two products are substantially similar.
2. Since we could not find acute toxicity data for 66222-86, we are unable to generate an acute toxicity profile for 83529-LA.
3. The signal word is Caution. We recommend that the proposed product use the same precautionary labeling as the cited product.
4. The proposed basic CSF submitted for 83529-LA must be reviewed and accepted by the product chemists in the Chemistry, Inerts and Toxicology Assessment Branch.

<div style="display: inline-block; text-align: center;"> United States Environmental Protection Agency Washington, DC 20460 </div>		✓	Registration	OPP Identifier Number
			Amendment	
			Other	
Application for Pesticide - Section I				
1. Company/Product Number 83529-XX		2. EPA Product Manager Kathryn Montague		3. Proposed Classification <input checked="" type="checkbox"/> None Restricted
4. Company/Product (Name) Sharda USA LLC / Sharda Metolachlor 86.4EC		PM# 23		
5. Name and Address of Applicant (Include Zip Code) Sharda USA LLC c/o Wagner Regulatory Associates, Inc. P.O. Box 640 Hockessin, DE 19707 <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. 66222-86 Product Name: Parallel		
Section - II				
<input type="checkbox"/> Amendment - Explain below. <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ <input type="checkbox"/> Resubmission in response to Agency letter dated _____ <input checked="" type="checkbox"/> "Me Too" Application. <input type="checkbox"/> Notification - Explain below. <input type="checkbox"/> Other - Explain below.				
Explanation: Use additional page(s) if necessary. (For Section I and Section II.)				
Section - III				
1. Material This Product Will Be Packaged In:				
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes" No. per container Unit Packaging wgt. container	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes" No. per container Package wgt. container	2. Type of Container <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) HDPE lined bags	
* Certification must be submitted				
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1, 2.5, 5 gallons		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Other ___adhesive backed label___ <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled				
Section - IV				
1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)				
Name Cheryl Wagner		Title Agent for Sharda USA, LLC		Telephone No. (Include Area Code) (302) 635-7290 Cheryl@wagnerreg.com
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.				6. Date Application Received (Stamped)
2. Signature 		3. Title Agent for Sharda USA LLC		
4. Typed Name Cheryl Wagner		5. Date February 29, 2016		

This is a reproduction of EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

DOCUMENTUM



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

March 2, 2016

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

OPP Decision Number: D-514573
EPA File Symbol or Registration Number: 83529-LA
Product Name: Sharda Metolachlor 86.4EC
EPA Receipt Date: 29-Feb-2016
EPA Company Number: 83529
Company Name: SHARDA USA LLC

CHERYL WAGNER
WAGNER REGULATORY ASSOCIATES, INC.
SHARDA USA LLC
PO Box 640
HOCKESSIN, DE 19707-

SUBJECT: Receipt of Registration Application Subject to Registration Service Fee

Dear Registrant:

The Office of Pesticide Programs has received your application and certification of payment. If you submitted data with this application, the results of the PRN-2011-3 screen will be communicated separately. During the administrative screen, the Office of Pesticide Programs has determined that this Action is subject to a Pesticide Registration Service Fee as defined in the Pesticide Registration Improvement Act.

The Action has been identified as Action Code: R300
NEW PRODUCT;OR SIMILAR COMBINATION PRODUCT (ALREADY REGISTERED) TO AN IDENTICAL OR SUBSTANTIALLY SIMILAR IN COMPOSITION AND USE TO A REGISTERED PRODUCT;REGISTERED SOURCE OF ACTIVE INGREDIENT;NO DATA REVIEW ON ACUTE TOXICITY, EFFICACY OR CRP - ONLY PRODUCT CHEMISTRY DATA;CITE-ALL DATA CITATION, OR SELECTIVE DATA CITATION WHERE APPLICANT OWNS ALL REQUIRED DATA, OR APPLICANT SUBMITS SPECIFIC AUTHORIZATION LETTER FROM DATA OWNER;CATEGORY ALSO INCLUDES 100% RE-PACKAGE OF REGISTERED END-USE OR MANUFACTURING-USE PRODUCT THAT REQUIRES NO DATA SUBMISSION NOR DATA MATRIX;

No additional payment is due at this time.

If you have any questions, please contact the Pesticide Registration Service Fee Ombudsman at (703) 308-9362.

Sincerely,

Neresa Downs
Neresa Downs
Front End Processing Staff

Information Technology & Resources Management Division

Fee for Service

{981994Y~

This package includes the following

☒ New Registration

☐ Amendment

☒ Studies? ☐ Fee Waiver?

☐ volpay % Reduction: ____

for Division

☐ AD

☐ BPPD

☒ RD

Risk Mgr.

23

Receipt No.

S-

981994

EPA File Symbol/Reg. No.

83529-LA

Pin-Punch Date:

2/29/2016

☐ This item is NOT subject to FFS action.

Action Code:

Requested:

2300

Granted:

2300

Amount Due: \$ 1582.00

Parent/Child Decisions:

☒ Inert Cleared for Intended Use

☐ Uncleared Inert in Product

Reviewer:

M. Lens

Date:

3/2/16

Remarks:

SIM CLINIC NEEDED — CITING SIMILARITY
TO 66222-86
— DOING CITE ALL
DOCUMENTUM
coded in documentum

Receipt for Section 3

S: 981994

Milestone Email: jmw@wagnerreg.com

Regulatory Type: Product Registration - Section 3

Resubmission: ☐ Yes ☒ No

Application Type: New Registration

Fee For Service: ☐ Yes ☒ No

Company: 83529 SHARDA USA LLC

Billable: ☐ Yes ☒ No

V

Print Letter

Enter More Information

Tracking

Risk Manager: Registration Division Risk Management Team 23

Product #: 83529-LA

Product Name: Sharda Metolachlor 86.4EC

Override:

Me Too Section 3: 66222-86

Me Too Product Name: PARALLEL PCS

Application Date: 29-Feb-2016

OPP Recvd Date: 29-Feb-2016

Front End Date: 01-Mar-2016

Risk Manager Send Date:

FFS Due Date:

Negotiated Due Date:

OPP Target Date:

Fast Track: ☐

New Ingredient: ☐

Receipt Description:

Portal submission pkg. #10247. Registration of a new end-use product.

Receipt Content

Study

CSF

View/Edit

Form A: ☐ Signature Date:

Form B: ☐ Signature Date:

Cheryl Wagner

From: notification@pay.gov
Sent: Monday, February 29, 2016 11:34 AM
To: Cheryl Wagner
Subject: Pay.gov Payment Confirmation: PRIA Service Fees

Your payment has been submitted to Pay.gov and the details are below. If you have any questions regarding this payment, please contact Michael Yanchulis at (703) 347-0237 or yanchulis.michael@epa.gov.

Application Name: PRIA Service Fees
Pay.gov Tracking ID: 25Q6T8J7
Agency Tracking ID: 74967903813
Transaction Type: Sale
Transaction Date: 02/29/2016 11:33:51 AM EST

Account Holder Name: Cheryl R. Wagner

Transaction Amount: \$1,582.00
Card Type: AmericanExpress
Card Number: *****2008

Registration Number:
Company Name: Sharda USA LLC
Company Number: 83529
Action Code: R300

THIS IS AN AUTOMATED MESSAGE. PLEASE DO NOT REPLY.

E-SUBMISSION

February 29, 2016

Document Processing Desk (REGFEE)
ATTN: Kathryn Montague (PM 23)
Registration Division (7505P)
U.S. Environmental Protection Agency
Office of Pesticide Programs
One Potomac Yard
2777 South Crystal Drive
Arlington, Virginia 22202



Re: Application to register a new end-use product - "Sharda Metolachlor 86.4EC (PRIA R300)"

Dear Ms. Montague:

Wagner Regulatory Associates, Inc., as agent for Sharda USA LLC, is requesting registration of the above referenced product. In support of this request, enclosed are the following documents:

- Letter from Sharda USA LLC, appointing Wagner Regulatory Associates, Inc. as its agent
- Application for Pesticide Registration (8570-1)
- Confidential Statement of Formula (8570-4)
- Formulator's Exemption Statement (8570-27)
- Data Matrix, EPA internal and public (8570-35)
- Certification Statement (8570-34)
- Draft label
- Statement with Respect to Label Integrity
- A copy of the receipt confirming payment of the required registration fees – R300 \$1,582
- Data reports as listed in the Transmittal Document

If you have any questions about this submission please contact the undersigned at (302) 635-7289 or cheryl@wagnerreg.com.

Respectfully submitted,

Cheryl Wagner
Agent for Sharda USA LLC

Enclosures

DOCUMENTUM



United States
Environmental Protection Agency
Washington, DC 20460
Formulator's Exemption Statement
(40 CFR 152.85)

Applicant's Name and Address Sharda USA LLC c/o Wagner Regulatory Associates P.O. Box 640 Hockessin, DE 19707	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px 5px;">EPA File Symbol/Registration Number 83529-XX</td> </tr> <tr> <td style="padding: 2px 5px;">Product Name Sharda Metolachlor 86.4EC</td> </tr> <tr> <td style="padding: 2px 5px;">Date of Confidential Statement of Formula (EPA Form 8570-4) 02/29/2016</td> </tr> </table>	EPA File Symbol/Registration Number 83529-XX	Product Name Sharda Metolachlor 86.4EC	Date of Confidential Statement of Formula (EPA Form 8570-4) 02/29/2016
EPA File Symbol/Registration Number 83529-XX				
Product Name Sharda Metolachlor 86.4EC				
Date of Confidential Statement of Formula (EPA Form 8570-4) 02/29/2016				

As an authorized representative of the applicant for registration of the product identified above, I certify that:

(1) This product contains the following active ingredient(s):

Metolachlor

(2) Of these, each active ingredient listed in paragraph (4) is present solely as the result of the use of that active ingredient in the manufacturing, formulation or repackaging another product which contains that active ingredient which is registered under FIFRA Section 3, is purchased by us from another person and meets the requirements of 40 CFR section 158.50(e)(2) or (3).

(3) Indicate by checking (A) or (B) below which paragraph applies:

☒ (A) An accurate Confidential Statement of Formula (EPA FORM 8570-4) for the above identified product is attached to this statement. That formula statement indicates, by company name, registration number, and product name, the source of the active ingredient(s) listed in paragraph (1).

OR

☐ (B) The Confidential Statement of Formula (CSF)(EPA Form 8570-4) referenced above and on file with the EPA is complete, current, an accurate and contains the information required on the current CSF.

(4) The following active ingredients in this product qualify for the formulator's exemption.

Source		
Active Ingredient	Product Name	Registration Number
Metolachlor	[REDACTED]	[REDACTED]
Signature 	Name and Title Cheryl R Wagner, Agent	Date 02/29/2016

EPA Form 8570-27 (Rev. 06-2004)

Copy 1 - EPA
Copy 2 - Applicant copy

DOCUMENTUM



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
1200 Pennsylvania Avenue, N.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 1.25 hours per response for registration and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, Collection Strategies Division (2822T), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, N.W., Washington, DC 20460. Do not send the completed form to this address.

Certification with Respect to Citation of Data

Applicant's/Registrant's Name, Address, and Telephone Number
 Sharda USA LLC c/o WRA, Inc., P.O. Box 640, Hockessin, DE 19707

EPA Registration Number/File Symbol
 83529-XX

Active Ingredient(s) and/or representative test compound(s)
 Metolachlor

Date
 February 29, 2016

General Use Pattern(s) (list all those claimed for this product using 40 CFR Part 158)
 Terrestrial Non-Food

Product Name
 Sharda Metolachlor 86.4EC

NOTE: If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

☐ I am responding to a Data-Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

SECTION I: METHOD OF DATA SUPPORT (Check one method only)

☐ I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

☒ I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).

SECTION II: GENERAL OFFER TO PAY

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

☒ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

SECTION III: CERTIFICATION

I certify that this application for registration, this form for reregistration, or this Data-Call-In response is supported by all data submitted or cited in the application for registration, the form for reregistration, or the Data-Call-In response. In addition, if the cite-all option or cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses.

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original data submitter or that I have obtained the written permission of the original data submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the permission of the original data submitter to use the study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (i) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature

Cheryl R. Wagner

Date

Feb. 29, 2016

Typed or Printed Name and Title

Cheryl Wagner, Agent for Sharda USA LLC



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Form Approved OMB No. 2070-0060

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reading the instruction and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington DC 20460. Do not send the form to this address.

DATA MATRIX

Date: February 29, 2016	EPA Reg No./ File Symbol: 83529-XX	Page 1 of 2
Applicant's/Registrant's Name and Address: Sharda USA LLC, c/o Wagner Regulatory Associates, Inc. P.O. Box 640 Hockessin, DE 19707	Product: Sharda Metolachlor 86.4EC	
Ingredient: Metolachlor		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
PRODUCT SPECIFIC	PRODUCT SPECIFIC DATA				
830.1550	Product Identity and Composition	49831401	Sharda USA LLC	OWN	
830.1600	Description of Materials Used to Produce the Product	49831401	Sharda USA LLC	OWN	
830.1650	Description of Formulation Process	49831401	Sharda USA LLC	OWN	
830.1670	Discussion of Formation of Impurities	49831401	Sharda USA LLC	OWN	
830.1700	Preliminary Analysis		Sharda USA LLC	OWN	1
830.1750	Certified Limits	49831401	Sharda USA LLC	OWN	
830.1800	Enforcement Analytical Method	49831403	Sharda USA LLC	OWN	
830.6302	Color	49831402	Sharda USA LLC	OWN	
830.6303	Physical State	49831402	Sharda USA LLC	OWN	
830.6304	Odor	49831402	Sharda USA LLC	OWN	
830.6313	Stability to Normal and Elevated Temperatures		Sharda USA LLC	OWN	1
830.6314	Oxidation/Reduction: Chemical Incompatibility	49831402	Sharda USA LLC	OWN	
830.6315	Flammability	49831402	Sharda USA LLC	OWN	
830.6316	Explosibility		Sharda USA LLC	OWN	2
830.6317	Storage Stability	49831403	Sharda USA LLC	OWN	
830.6319	Miscibility		Sharda USA LLC	OWN	3
830.6320	Corrosion Characteristics	49831403	Sharda USA LLC	OWN	
830.6321	Dielectric Breakdown Voltage		Sharda USA LLC	OWN	4
830.7000	pH	49831402	Sharda USA LLC	OWN	
830.7100	Viscosity	49831402	Sharda USA LLC	OWN	
830.7300	Density/Relative Density/Bulk Density	49831402	Sharda USA LLC	OWN	

Signature 	Name and Title James Wagner	Date: February 29, 2016
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Form Approved OMB No. 2070-0060

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reading the instruction and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington DC 20460. Do not send the form to this address.

DATA MATRIX

Date: February 29, 2016	EPA Reg No./ File Symbol: 83529-XX	Page 1 of 2
Applicant's/Registrant's Name and Address: Sharda USA LLC, c/o Wagner Regulatory Associates, Inc. P.O. Box 640 Hockessin, DE 19707	Product: Sharda Metolachlor 86.4EC	
Ingredient: Metolachlor		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
PRODUCT SPECIFIC	PRODUCT SPECIFIC DATA				
			Sharda USA LLC	OWN	
			Sharda USA LLC	OWN	
			Sharda USA LLC	OWN	
			Sharda USA LLC	OWN	
			Sharda USA LLC	OWN	1
			Sharda USA LLC	OWN	
			Sharda USA LLC	OWN	
			Sharda USA LLC	OWN	
			Sharda USA LLC	OWN	
			Sharda USA LLC	OWN	
			Sharda USA LLC	OWN	1
			Sharda USA LLC	OWN	
			Sharda USA LLC	OWN	
			Sharda USA LLC	OWN	2
			Sharda USA LLC	OWN	
			Sharda USA LLC	OWN	3
			Sharda USA LLC	OWN	
			Sharda USA LLC	OWN	4
			Sharda USA LLC	OWN	
			Sharda USA LLC	OWN	
			Sharda USA LLC	OWN	

Signature 	Name and Title James Wagner	Date: February 29, 2016
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Waiting for data
AB 03/11/16

21-Day Screen Completed by
Contractor

21-Day Expires on 3/21/16

Jacket # 83529-LA

MRID# 498314

Content Screen: Recommend to Pass/Fail

11-3 Review: Pass/Fail/NA

Overall Status: Recommend to Pass/Fail

Transfer This Jacket to:

Steve Schaible



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

March 03, 2016

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

WAGNER REGULATORY ASSOCIATES, INC.
SHARDA USA LLC
PO.BOX : 640
HOCKESSIN, DE 19707

Report of Analysis for Compliance with PR Notice 11-03

Thank you for your submittal of 29-FEB-16. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your submittal was found to be in full compliance with the standards for submission of data contained in PR Notice 11-03. A copy of your bibliography is enclosed, annotated with Master Record ID's (MRIDs) assigned to each document submitted. Please use these numbers in all future references to these documents. Thank you for your cooperation. If you have any questions concerning this data submission, please raise them with the cognizant Product Manager, to whom the data have been released.

Transmittal

Sponsor:

Wagner Regulatory Associates, Inc.

P.O. Box 640

7217 Lancaster Pike, Suite A

Hockessin, DE 19707

MRID:STUDY:

49831401	Wagner, J. (2016) Sharda Metolachlor 86.4 EC: Product Identity and Composition, Description of the Formulation Process, Discussion of Formation of Impurities, Preliminary Analysis and Certified Limits. Unpublished study prepared by Wagner Regulatory Associates, Inc. 42p.
49831402	Theus, S. (2015) Physical and Chemical Characteristics of Metolachlor 86.4% w/w EC; Final Report. Project Number: ARC/EX/1715/004/P/1, ARC/EX/1715, ARC/EX/1715/001/P. Unpublished study prepared by Analytical & Regulatory Chemistry, Inc. 20p.
49831403	Leopard, J. (2016) Accelerated Storage Stability and Corrosion Characteristics of Metolachlor 86% w/w EC; Final Report. Project Number: ARC/EX/1716/009/P/1, ARC/EX/1716, ARC/EX/1716/001/P. Unpublished study prepared by Analytical & Regulatory Chemistry, Inc. 42p.

PRIA 3 – 21 Day Content Screen Review Worksheet

(EPA/OPP Use Only)

September 2012

21 Day Screen Start Date: 2/29/16

Experts In-Processing Signature: mlp Date 3/3/16 Fee Paid: Yes ☒

Division management contacted on issues No ☐ Yes ☐ Date _____

EPA Reg. Number: <u>83529-LA</u>		EPA Receipt Date: <u>2/29/16</u>				
Items for Review			Yes	No	N/A*	
1	Application Form (EPA Form 8570-1) signed & complete including package type			<input checked="" type="checkbox"/>		
2	Confidential Statement of Formula all boxes completed, form signed, and dated (EPA Form 8570-4)			<input checked="" type="checkbox"/>		
	a) All <u>inerts</u> , including fragrances, approved for the proposed uses (see Footnote A)	yes	no			
		<input checked="" type="checkbox"/>				
3	Certification with Respect to Citation of Data (EPA Form 8570-34) completed and signed (N/A if 100% repack)			<input checked="" type="checkbox"/>		
	Certificate and data matrix consistent			<input checked="" type="checkbox"/>		
	If applicant is relying on data that are compensable, is the offer to pay statement included. (see Footnote B)	yes	no			
	If applicable, is there a letter of Authorization for exclusive use only.					
4	Formulator's Exemption Statement (EPA Form 8570-27) completed and signed (N/A if source is unregistered or applicant owns the technical)			<input checked="" type="checkbox"/>		
	Data Matrix (EPA Form 8570-35) both internal and external copies (PR 98-5) completed and signed (N/A if 100% repack)			<input checked="" type="checkbox"/>		
5	a) Selective Method (Fee category experts use)	yes	no			
		<input checked="" type="checkbox"/>				
	b) Cite-All (Fee category experts use)					
	c) Applicant owns all data (Fee category experts use)					
6	5 Copies of Label (Electronic labels on CD are encouraged and guidance is available)			<input checked="" type="checkbox"/>		
7	Is the data package consistent with PR Notice 86-5			<input checked="" type="checkbox"/>		
8	Notice of Filing included with petitions					<input checked="" type="checkbox"/>

9	If applicable for conventional applications, <u>reduced risk rationale</u>			X
10	<u>Required Data</u> and/or data waivers. See Footnote C.			
	a) List study (or studies) not included with application			

Comments:

Documentation: Pass / Fail
 - required forms are complete

Inerts: Pass / Fail
 Inerts approved for food use under 40 CFR 180.920, pre harvest application to growing crops.

PRN 11-3: Pass / Fail
 MRID: 498314

Overall status: Pass / Fail

SM 3/10/16

* N/A – Not Applicable

Footnotes

A. During the 21 day initial content review, all CSFs will be reviewed to determine whether all inerts listed, including fragrances, are approved for the proposed uses or have an application pending with the Agency. If an unapproved inert with no application pending with the Agency is identified, the applicant must either 1) resolve the inert issue by, for example, removing the inert, substituting it with an approved inert, submitting documentation that EPA approved the inert for the proposed pesticidal uses, correcting mistakes on the CSF, etc. or 2) provide the data to support OPP approval of the inert or 3) withdraw the application. Removing or substituting an inert ingredient will require a new CSF and may require submission of data. All information, forms, data and documentation resolving the inert issue must have been received by the Agency or the application withdrawn within the 21 day period, otherwise, the Agency will reject the application as described below.

To successfully complete this aspect of the 21 day initial content screen, applicants are **strongly encouraged** to verify that all inert ingredients have been approved for the application's uses or have an application pending with the Agency **even if a product is currently registered** by consulting the [inert Web site](#) and if the inert is not approved nor has an application pending with the Agency, to **obtain the necessary inert approval prior to submitting an application to register a pesticide product containing that inert ingredient**. Some inert ingredients are no longer approved for food uses or certain types of uses. The name and/or CAS number on a CSF must match the name and CAS number on this web site. Simple typographical errors in the name or CAS number have resulted in processing delays.

If an inert is not listed on the inert ingredient web site and the applicant believes that the inert has been approved, the applicant should contact the Inert Ingredient Assessment Branch (IIAB) at inertsbranch@epa.gov and resolve the issue. Copies of the correspondence with IIAB resolving the issue should accompany the application. All new inerts except PIP inerts are reviewed by IIAB. The IIAB should also be contacted for any questions on what supporting data needs to be submitted for and the Agency's inert review process. Questions on PIP inerts should be directed to the [Chief of Microbial Pesticides Branch](#).

When a brand, trade, or proprietary name of an inert ingredient is listed on a CSF, additional information such as an alternate name of the inert, CAS number or other information must also be included to enable the Agency to determine if it has been approved. Each component of an inert mixture (including a fragrance) must be identified. In some cases, the supplier of the mixture or fragrance may need to provide this information to the Agency. Prior to the Agency's receipt of an application, applicants must arrange with a proprietary mixture or fragrance supplier to provide the component information to the Agency or promptly upon EPA's request. If the inert ingredients in a proprietary blend (including fragrances) cannot or are not identified or provided within the 21-day content review period, the Agency will reject the application.

During the 21 day content review, applicants should submit information to the individual identified by the Agency when the applicant is informed of an unapproved inert.

Unapproved Inerts Identified on CSFs

All applications except conventional new products and PIPs

Once an unapproved inert is identified on a CSF, the Agency will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or
2. Provide the required information necessary to identify an inert approval application that is pending with the Agency; or
3. Submit the information and data needed for the Agency to approve the unapproved inert. If this option is selected and implemented, the Agency may request an extension in the PRIA decision review timeframe to accommodate the inert review/approval process;
4. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of these options is selected and implemented by the applicant within the 21 day content review period, the Agency will reject the application and retain 25% of the full fee of the category identified.

Conventional New Product Applications

When the Registration Division identifies an unapproved inert on a CSF with an application for a new product that the applicant has not identified as requiring an inert approval (R300 or R301), it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or
2. Submit the information and data needed for the Agency to approve the unapproved inert, including any required petition to establish or amend a tolerance or exemption from a tolerance. (This option may change the PRIA category for the application, which could require a longer decision review time and a larger fee. If additional fees are due, they must be received by the Agency within the 21 day content review period.)

3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21-day content-review period, the Agency will reject the application and retain 25% of the appropriate fee for the new product-inert approval category.

PIP Applications

When the Biopesticide and Pollution Prevention Division identifies an unapproved inert on a PIP CSF and a request to approve the inert does not accompany the application, it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the spelling or name of the inert to that in 40 CFR 174, or providing documentation that the inert has been approved; or
2. Submit the information and data needed for the Agency to approve the unapproved inert. If an inert ingredient tolerance exemption petition is required, the petition must be received by the Agency and the B903 fee paid within the 21 day period. If this option is selected and implemented, the Agency will discuss harmonizing the timeframe for both actions.
3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21 day content review period, the Agency will reject the application and retain 25% of the fee.

B. A policy on documentation of offers to pay is still being developed, however, for a me-too or fast track (similar/identical) new product, R300 or A530, an application without the necessary authorizations of offers to pay will be placed into either R301 or A531. The Agency recommends that authorizations of offers to pay be submitted with other PRIA applications to avoid delays in the Agency's decision.

C. Biopesticide applicants are advised to contact the Agency and discuss study waivers prior to submitting their application to the Agency. Documentation of such discussions should be submitted with the study waiver.

R300 and 301

100% identical (repack): YES or (NO) (circle one)

{If **yes**, it's a 100% repack - then product chemistry, acute toxicity and efficacy data are not required}

Data on Group A and B must be submitted - Group A and B can not be cited.

Guideline No.	Group A: Product Chemistry Data Study Title	Data submitted	
		Yes	No
830.1550	Product Identity & Composition	X	
830.1600	Description of materials used to produce the product	X	
830.1650	Description of formulation process	X	
830.1670	Discussion on the formation of impurities	X	
830.1700	Preliminary analysis	X	
830.1750	Certified limits (158.345)	X	
830.1800	Enforcement analytical method	X	

Guideline No.	Group B: Product Chemistry Data Study Title	Data submitted	
		Yes	No
830.6302	Color	X	
830.6303	Physical State	X	
830.6304	Odor	X	
830.6314	Oxidation/Reduction (Chemical incompatibility)	X	
830.6315	Flammability	X	
830.6316	Explosibility	X	
830.6317	Storage stability	X	
830.6319	Miscibility	X	
830.6320	Corrosion Characteristics	X	
830.6321	Dielectric Breakdown voltage	X	
830.7000	pH	X	
830.7100	Viscosity	X	
830.7300	Density	X	

R 300 and 301

New products must provide a bridging rationale document. The bridging document directs OPP to use a currently registered set of 6 acute toxicity data and label; instead of submitting product specific data.

Guideline No.	Acute toxicity (6 pack) Study Title	Cited	
		Yes	No
870.1100	Acute Oral (LD50)	X	
870.1200	Acute Dermal (LD50)	X	
870.1300	Acute Inhalation (LC50)	X	
870.2400	Acute Eye Irritation	X	
870.2500	Acute Dermal Irritation	X	
870.2600	Dermal Sensitization	X	

Efficacy – which guideline depends on the proposed label use and they must cite the data to be used for the bridging rationale.

Guideline No.	Efficacy Study Titles	Cited		Comments
		Yes	No	
810.3100	Soil Treatments for Imported Fire Ants			N/A
810.3200	Livestock, Poultry, Fur and Wool-Bearing Animal Treatments			N/A
810.3300	Treatments to Control Pests of Humans and Pets			N/A
810.3400	Mosquito, Black Fly, and Biting Midge (Sand Fly) Treatments			N/A
810.3500	Premises Treatments			N/A
810.3600	Structural Treatments			N/A
810.3800	Methods for Efficacy Testing of Termite Baits			N/A

Certification with Respect to Label Integrity

version: 9/11/02

I certify that the information (including, but not limited to, text, tables, and graphics) contained in the electronic file identified below by file name and submitted with this certification is the same information as that on the paper copies of these documents included with this submission.

PROPOSED LABEL		
EPA Registration #	Date Submitted to EPA	Electronic file name
83529-XX	Feb. 29, 2016	83529-000XX.20160229.V1

I certify that the statements that I have made on this form are true, accurate, and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.


Signature

Date: 02/29/2016

Cheryl Wagner
Name (typed)

Agent for Sharda USA LLC
Title

DOCUMENTUM

Sharda Metolachlor 86.4EC

Herbicide for use in corn, cotton, peanuts, pod crops, potatoes, safflower, grain
or forage sorghum, soybeans and tomatoes

ACTIVE INGREDIENT:	WT. BY %
Metolachlor: 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl) actamide.....	86.4%
OTHER INGREDIENTS:	13.6%
TOTAL:	100.00%

Contains 8.0 lbs. of active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand this label, find someone to explain it to you in detail.)

FIRST AID	
IF INHALED:	<ul style="list-style-type: none">• Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.• Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.
IF IN EYES:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.• Call a poison control center or doctor for further treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice.• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to by a poison control center or doctor.• Do not give anything to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. In case of an emergency involving this product, call CHEMTREC at 1-800-424-9300.	

[See inside booklet for complete [additional] [First Aid,] Precautionary Statements, and Directions For Use.]

EPA Reg. No. 83529-XX

EPA Est. No. XXXXX-XX-XXX

Manufactured for:

Sharda USA LLC



7217 Lancaster Pike, Suite A
Hockessin, Delaware 19707

Net Contents: _____

DOCUMENTUM

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS
CAUTION**

Harmful if inhaled, absorbed through skin or swallowed. Causes eye irritation. Avoid breathing vapor spray mist. Avoid contact with skin, eyes or clothing. This product may cause skin sensitization reactions in some people.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow instructions on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves, such as barrier laminate, butyl rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, or nitrile rubber ≥ 14 mils, polyethylene, PVC, or Viton
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROL STATEMENTS

Mixers and loaders supporting aerial applications are required to use closed systems. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4)). When using this closed system, the mixers and loaders PPE requirements may be reduced or modified as specified in the WPS.

When handlers used closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. DO NOT contaminate water when disposing of equipment washwaters or rinsate.

Groundwater Advisory and Proper Handling Instructions

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Metolachlor can contaminate surface water through ground spray drift. Under some conditions, metolachlor may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several months post application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

DO NOT allow **Sharda Metolachlor 86.4EC** to back-siphon into wells, spill, or improper disposal of excess pesticide, spray mixtures, or rinsates.

Check valves or anti-siphoning devices must be used on all mixing and/or irrigation equipment.

Do not mix or load **Sharda Metolachlor 86.4EC** within 50 feet of perennial or intermittent streams and rivers, natural or impounded lakes, and reservoirs. Do not mix or load **Sharda Metolachlor 86.4EC** within 50 feet of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of **Sharda Metolachlor 86.4EC** into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash-water, and rain water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means that the pad must be self-contained. The pad must be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or

application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. This labeling must be in the possession of the user at the time of pesticide application.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **24 hours**.

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves such as barrier laminate, butyl rubber ≥ 14 mils, or nitrile rubber ≥ 14 mils, or neoprene rubber ≥ 14 mils, polyethylene, PVC, or Viton
- Shoes plus socks

Failure to follow the Directions for Use, Restrictions, and Precautions in this label can result in poor weed control, crop injury, and/or illegal residues.

Not for sale, use, or distribution in Nassau or Suffolk counties in New York.

Do not apply **Sharda Metolachlor 86.4EC** in windy conditions. Do not allow spray to overlap as crop injury can occur.

PRODUCT INFORMATION

Observe all precautions and limitations on the labels of each state-registered product used in tank mixtures. Tank mixtures are permitted only in states where the tank mix partner product is registered.

Sharda Metolachlor 86.4EC is a selective herbicide that can be used pre-plant surface-applied, pre-plant incorporated, or pre-emergence treatment in water or liquid fertilizer to control listed annual grasses and broadleaf weeds in all types of corn, cotton, peanuts, pod crops, potatoes, safflower, grain/forage sorghum, soybeans and tomatoes. Post-emergence applications of **Sharda Metolachlor 86.4EC** can be made on corn and soybeans.

RESISTANCE MANAGEMENT

Sharda Metolachlor 86.4EC is a Group 15 herbicide. Weed populations may contain or develop plants that become naturally resistant to metolachlor and/or other Group 15 herbicide products. If Group 15 herbicides are used repeatedly in the same field or in successive years as the primary method of control of targeted species, weed species that have developed resistance to Group 15 herbicides can dominate the weed population, resulting in partial or total loss of weed control.

To avoid herbicide resistance:

- Do not use **Sharda Metolachlor 86.4EC** consecutively with other Group 15 herbicides that have similar modes of action on targeted weed.
- Use tank mixtures and premixes from different Groups provided that the products involved are registered for the same use, have different modes of action, and/or are effective at the tank mix or prepack rate on the weed(s) concerned.
- Utilize a comprehensive Integrated Pest Management (IPM) program.
- Monitor treated areas for loss of field efficacy.
- Contact your local state extension specialist, certified crop advisors, and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

APPLICATION INSTRUCTIONS

SOIL TEXTURES AND APPLICATION RATES

Where rates are based soil texture, classes are categorized as follows:

Coarse-Textured	Medium-Textured	Fine-Textured
Sand, Loamy sand, Sandy loam	Loam, Silt loam, Silt	Sandy clay loam, Silty clay loam, Clay loam, Sandy clay, Silty loam, Silty clay, Clay

Coarse-Textured/Low Organic Matter Soils: Use the lower rate within the specified rate range.

Fine-Textured/High Organic Matter Soils: Use the higher rate within the specified rate range.

APPLICATION METHODS

Apply **Sharda Metolachlor 86.4EC** pre-emergence alone, or in combination with specified tank mix partners following pre-plant incorporated herbicides when used according to label instructions and such use is not prohibited on the respective labels.

Thoroughly clean sprayer/application device before applying **Sharda Metolachlor 86.4EC**. Dispose of cleaning solution in a responsible manner. Do not use a sprayer or applicator contaminated with any other materials to avoid crop damage and/or clogging of the application device.

MIXING INSTRUCTIONS

Mix **Sharda Metolachlor 86.4EC** alone with water or liquid fertilizer and apply as a spray:

- Fill the spray tank $\frac{1}{2}$ - $\frac{3}{4}$ full of water or liquid fertilizer.
- Add the specified amount of **Sharda Metolachlor 86.4EC**.
- Add the remaining water or liquid fertilizer.
- Maintain sufficient agitation during mixing and application to maintain a uniform emulsion.

TANK MIX APPLICATIONS

Tank Mixtures:

- Fill the spray tank $\frac{1}{4}$ full with water, and begin agitation.
- Add 2,4-D, AAtrex®, Balan®, Banvel, Basagran®, Butoxone®, Butyrac®, Canopy®, Caparol 4L®, Command®, Cotoran®, Eptam®, Gemini®, Lexone®, Lorox®, Lorox Plus, Marksman®, MSMA, Preview®, Princep®, Prowl®, Pursuit®, AAtrex + Princep, Scepter®, Sencor®, Sonalan®, Starfire®, or Treflan®, ensuring products disperse.
- Add **Sharda Metolachlor 86.4EC**.
- Add Gramoxone® Extra, Landmaster® BW, or Roundup® if these products are being used.
- Add the rest of the water.

For tank mixtures with AAtrex, Banvel, Canopy, Caparol 4L, Command, Cotoran®, Eptam, Gemini, Lexone, Lorox, Lorox Plus, Marksman, Preview, Princep, Prowl®, Pursuit, AAtrex + Princep, Scepter, Sencor, Sonalan, Starfire, or Treflan, liquid fertilizers can replace all or part of the water as carrier, except for AAtrex post-emergence and Banvel post-emergence tank mixes. For tank mixtures with AAtrex, refer to the AAtrex label for additional mixing instructions. For each mixture, check compatibility with liquid fertilizers before mixing in spray tank. For all tank mixtures, agitate during mixing and application to maintain a uniform suspension.

*See **Special Mixing Instructions** for tank mixtures with Cotoran, and with AAtrex or Princep + Prowl under the appropriate tank mixture section.

Compatibility Test

Because liquid fertilizers vary, even within the same analysis, always **check compatibility with herbicide(s) prior to use**. Serious compatibility issues are most likely to occur when mixing with complete suspension or liquid fertilizers. Commercial application equipment can improve compatibility. The following test assumes a spray volume of 25 gals./A. For other spray volumes, make appropriate changes in the ingredients. To check compatibility:

1. Add 1 pint of fertilizer to each of 2 one-quart jars with tight lids.
2. To **one** of the jars, add $\frac{1}{4}$ tsp. (1.2 milliliters) of a compatibility agent approved for this use such as Compex® or Unite® ($\frac{1}{4}$ tsp. is equivalent to 2 pts./100 gals. spray). Shake/stir gently to mix.
3. To **both** jars, add the appropriate amount of herbicide(s).

If more than one herbicide is used, add them separately in the following order:

- Dry herbicides first, flowables next, and emulsifiable concentrates last.
- After each addition, shake or stir gently to thoroughly mix.
- The appropriate amount of herbicides for this test is:

Dry Herbicides: For each pound to be applied per acre, add 1.5 level teaspoons to each jar.

Liquid Herbicides: For each pint to be applied per acre, add 0.5 teaspoon or 2.5 milliliters to each jar.

Note: For Sharda Metolachlor 86.4EC tank mixtures with AAtrex + Princep, use 1/3-1/2 the amount of AAtrex specified and the remainder as Princep, depending on whether the 1:2 or 1:1 ratio of AAtrex to Princep is to be applied.

4. After adding all ingredients, put lids on and tighten, and invert each jar 10 times to mix.
5. Let the mixtures stand 15 minutes.
6. After 15 minutes, check jars for chemical separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if a compatibility agent is needed in the spray mixture by comparing the 2 jars. If either mixture separates but can be remixed readily, the mixture can be sprayed as long as adequate agitation is maintained.

If the mixtures are incompatible, the following methods may improve compatibility:

- Slurry the dry herbicide(s) in water before adding, or
- Add 1/2 of the compatibility agent to the fertilizer, and the other 1/2 to the emulsifiable concentrate or flowable herbicide before adding to the mixture.

If incompatibility is still observed, do not use the mixture.

APPLICATION TIMING

Sharda Metolachlor 86.4EC alone or in some tank mixtures with other labeled herbicides may be applied for weed control in certain crops at various times. Refer to the given crop section of the label to determine if application timings listed below are specified.

Pre-Plant Surface Applications

45 days before planting: For minimum-tillage or no-tillage systems only, apply **Sharda Metolachlor 86.4EC** alone, or with **Sharda Metolachlor 86.4EC** tank mixtures.

30-45 days before planting: Make split applications, with $\frac{3}{4}$ the specified broadcast rate for the crop and soil texture applied initially and the remaining $\frac{1}{4}$ at planting.

Less than 30 days before planting: Make split applications or a single application.

Refer to individual crop to determine if early pre-plant surface application instructions are provided. If weeds are present at the time of treatment, apply in a tank mixture combination with a contact herbicide (for example, Gramoxone Extra or Roundup). Observe directions for use, precautions, and restrictions on the label of the contact herbicide. To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

a. Pre-Plant Incorporated: Apply **Sharda Metolachlor 86.4EC** to the soil and incorporate into the top 2 inches of soil within 14 days before planting, using a finishing disk, harrow, rolling cultivator, or similar implement capable of providing uniform 2-inch incorporation. Use a pre-plant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. If crop will be planted on beds, apply and incorporate **Sharda Metolachlor 86.4EC** after bed formation, unless specified otherwise.

b. Pre-Emergence: Apply **Sharda Metolachlor 86.4EC** during planting (behind the planter) or after planting but before weeds or crops emerge.

SPECIAL APPLICATION PROCEDURES

Pre-Plant Incorporated: CA Only (Safflower, Pod Crops): Make broadcast applications of **Sharda Metolachlor 86.4EC** to the soil and thoroughly incorporate with a disk or similar implement set to till 4-6 inches deep. For more thorough incorporation, till the soil in 2 different directions (cross-till). Crops may be planted on flat surface or on beds. Exercise caution when forming the beds that only soil from the **Sharda Metolachlor 86.4EC** treated area is used. Do not bring untreated soil to the surface. If applying to pre-formed beds, incorporate **Sharda Metolachlor 86.4EC** with a tillage implement set to till 2-4 inches deep. Ensure that **Sharda Metolachlor 86.4EC** treated soil remains in the beds.

Pre-Emergence Applications (CA only): Apply **Sharda Metolachlor 86.4EC** after planting and water by sprinkler or flood irrigation within 7-10 days.

Fall Applications in the states of Iowa, Minnesota, North Dakota, South Dakota, Wisconsin, North of Route 20 in Nebraska, North of Route 136 in Illinois: Apply **Sharda Metolachlor 86.4EC** on medium- and fine-textured soils with more than 2.5% organic matter that will be planted to corn or soybeans the following spring. The ground can be tilled before or after application. DO NOT apply to frozen ground. DO NOT exceed 2-3-inch incorporation depth if soil is tilled after treatment. If a spring application is made, the total rate of the fall application and the spring application combined must not exceed the maximum total rate for the specific crop or illegal residues can result.

Ground Application

Apply **Sharda Metolachlor 86.4EC** alone or in tank mixtures by ground equipment in a minimum of 10 gals. of spray mixture per acre unless otherwise specified.

Use sprayers that provide accurate and uniform application. For **Sharda Metolachlor 86.4EC** tank mixtures with wettable powder or dry flowable formulations, screens and strainers must not be finer than 50-mesh. Rinse sprayer thoroughly with clean water immediately after use.

Calculate the amount of herbicide needed for band treatment by the formula:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

Low Carrier Volumes: Broadcast Ground Application Only

Use sprayers, such as Ag-Chem RoGator®, Hagie, John Deere Hi-CycleT, Melroe Spra-Coupe, Tyler Patriot™, or Willmar Air Ride®, that provide accurate and uniform application. **Only water may be used as a carrier.** Screens in suction and in-line strainers must be 50-mesh. Manufacturers may require that tip screens as fine as 100-mesh be used with some nozzles. Use a pump with capacity to:

- maintain up to 35-40 psi at the nozzles
- provide sufficient agitation in tank to keep mixture in suspension.

Use a minimum of 5 gals. of spray mixture per acre. Maximum sprayer speed is 15 mph. Rinse sprayer thoroughly with clean water immediately after each use.

Note: Use low pressure nozzles to reduce drift and increase application accuracy. Exercise care when using automatic rate controlling devices to spray the material within the rated working pressure and flow ranges of the nozzles selected. Use nozzle screens used when specified by the manufacturer. Place nozzles on 20-inch centers, except flooding types which must be placed on 40-inch centers. When Flat Fan-type nozzles are used, use those with angles of 80° or 110°. Always read and follow the manufacturer's directions for optimum setup and performance of their nozzles or tips.

AERIAL APPLICATION

Apply **Sharda Metolachlor 86.4EC** with properly calibrated aerial equipment in 5 or more gallons of spray mixture per acre. Do not apply under conditions where uniform coverage cannot be obtained, or when excessive spray drift may occur. To avoid injury to sensitive crops from drift, aerial applications must adhere to the following **AERIAL USE DIRECTIONS, RESTRICTIONS AND PRECAUTIONS:**

- Nozzle height above the ground must be a maximum of 10 feet above the crop with low drift nozzles at a maximum pressure of 40 psi.
- Nozzles must be pointed toward the rear of the aircraft. The downward angle of the nozzle must not exceed 20 degrees.
- Nozzles and/or spray boom must not be located any closer to the end of the wing or rotor than ¾ the distance from the center of the aircraft.
- Use a maximum spray pressure of 40 psi.
- Establish a buffer zone between the area to be sprayed and sensitive crops.
- DO NOT spray when wind velocity is great than 5 mph.

The applicator is responsible for any loss or damage resulting from the application of **Sharda Metolachlor 86.4EC** in any manner not listed on this label. The applicator is responsible for following all state and local regulations and ordinances relative to spraying **Sharda Metolachlor 86.4EC**.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

Ground Applications: Apply using a nozzle height no more than 4 feet above the ground or crop canopy.

Aerial Applications: Product efficacy is reduced if the distance of the outermost nozzles on the boom exceed ¾ the length of the wingspan or rotor. Nozzles must point backward parallel with the air stream and must not be pointed downward more than 45 degrees.

Where states have more stringent regulations, they must be observed.

The applicator must be familiar with and account for the information provided in the **SPRAY DRIFT MANAGEMENT** section of this label.

IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets greater than 150-200 microns. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see **Wind, Temperature and Humidity, and Temperature Inversion** sections).

CONTROLLING DROPLET SIZE

- **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** – Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of nozzles** – Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** – Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

BOOM LENGTH

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

APPLICATION HEIGHT

Do not make applications at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

WIND

Drift potential is lowest between wind speeds of 2 – 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS

Do not apply during a temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small-suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

SENSITIVE AREAS

Sharda Metolachlor 86.4EC must only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas). Do not apply near humans or animals. Flagmen and loaders must avoid inhalation of spray mist and prolonged contact with skin.

APPLICATION WITH IMPREGNATED DRY BULK GRANULAR FERTILIZERS

Sharda Metolachlor 86.4EC may be impregnated or coated on many dry bulk granular fertilizers and applied with the fertilizers to control weeds. Follow all directions for use restrictions and precautions on the **Sharda Metolachlor 86.4EC** label regarding target crops, rates per acre, soil texture, application methods, and rotational crops.

It is the responsibility of the individual and/or company selling the herbicide/fertilizer mixture to comply with all individual state regulations relating to dry bulk granular fertilizer blending, registration, labeling, and application.

Prepare the herbicide/fertilizer mixture by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender. Space nozzles used to spray **Sharda Metolachlor 86.4EC** onto the fertilizer to provide uniform spray coverage. Aim the spray onto the fertilizer only, avoiding the walls of the blender.

If the herbicide/fertilizer mixture is too wet, add a highly absorptive material, such as Agsorb® FG or Celatom MP-79®, or similar granular clay or diatomaceous earth materials, to obtain a dry, free-flowing mixture. Add absorptive materials only after the herbicide has been thoroughly blended into the fertilizer mixture. Best application results are obtained when a granule of 6/30 particle size or of a size similar to that of the fertilizer materials is used. Use less than 2% by weight of absorptive material. Do not use more than 5% absorptive material by weight.

Calculate the amount of **Sharda Metolachlor 86.4EC** to be used per ton of fertilizer by using the following formula:

$2,000 / \text{pounds of fertilizer desired per acre} \times \text{number of pints Sharda Metolachlor 86.4EC required per acre} = \text{pints of Sharda Metolachlor 86.4EC per ton of fertilizer.}$

Application by Pneumatic (Compressed Air) Equipment: High humidity, high urea concentrations, low fertilizer use rates, and dusty fertilizer can cause fertilizer mixtures to build up and/or plug the distributor head, air tubes, or nozzle deflector plates. To minimize buildup, premix 2.0-2.5 pints/gallon **Sharda Metolachlor 86.4EC** and ExxonMobil™ Aromatic 200. Aromatic 200 is a noncombustible, nonflammable petroleum product that can be used in either a fertilizer blender or through direct injection systems. Do not use drying agents when using Aromatic 200.

If impregnating **Sharda Metolachlor 86.4EC** in a blender before application, substitute a drying agent for Aromatic 200 for a drier mixture. Add Agsorb® FG or another drying agent of 6/30 particle size. Do not use drying agents with On-The-Go impregnation equipment.

Precautions: Use mixtures of **Sharda Metolachlor 86.4EC** and Aromatic 200 on dry fertilizer only. Poor results or crop injury can occur if these mixtures are used in water or liquid fertilizer solutions for spraying applications.

Restrictions:

To avoid potential for explosion:

- DO NOT impregnate **Sharda Metolachlor 86.4EC** on ammonium nitrate, potassium nitrate, or sodium nitrate, either alone or in blends with other fertilizers.
- DO NOT combine **Sharda Metolachlor 86.4EC** with a single superphosphate (1-20-0) or triple superphosphate (0-46-0).
- DO NOT use **Sharda Metolachlor 86.4EC** on straight limestone as absorption will not occur.
- Fertilizer blends containing limestone can be impregnated.

Application of Impregnated Dry Bulk Granular Fertilizer

Apply 200 to 700 pounds of the herbicide/fertilizer mixture per acre. Apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential in order to prevent possible crop injury to subsequent rotational crops. Non-uniform application results in unsatisfactory weed control. In areas where conventional tillage is practiced, incorporate the mixture shallowly into the soil. On fine- or medium-textured soils in areas where soil incorporation is not planned, i.e., reduced-tillage situations or in some conventional till situations, apply **Sharda Metolachlor 86.4EC** approximately 30 days before planting to allow moisture to move the herbicide/fertilizer mixture into the soil. On coarse-textured soils, apply **Sharda Metolachlor 86.4EC** approximately 14 days prior to planting.

Application Precaution: Apply **Sharda Metolachlor 86.4EC** as early as possible to avoid rotational crop injury, since **Sharda Metolachlor 86.4EC** impregnated onto dry bulk fertilizers lasts longer in the soil than if it is applied as a spray in water or fluid fertilizer.

CHEMIGATION - CENTER PIVOT IRRIGATION

Sharda Metolachlor 86.4EC alone or in tank mixture with other herbicides on this label that are registered for center pivot application can be applied in irrigation water pre-emergence (after planting but before weeds or crop emerge) at specified rates listed on this label. Apply this product only through a center pivot irrigation system.

Do not apply this product through any other type of irrigation system.

Crop injury, reduced efficacy, and/or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact State Extension specialists, equipment manufacturers, or other experts. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Restriction: Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

Operating Instructions

1. The system must contain a functional check-valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from back flow.

2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump or piston pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. Prepare a mixture with a minimum of 1 part of water to 1 part herbicide(s) and inject this mixture into the center pivot system. Injecting a larger volume of a more dilute mixture per hour will usually provide more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension.
9. Meter into irrigation water during entire period of water application.
10. Apply in $\frac{1}{2}$ -1 inch of water. Use the lower water volume ($\frac{1}{2}$ inch) on coarse-textured soils and the higher volume (1 inch) on fine-textured soils. More than 1 inch of water at application may reduce weed control by moving the herbicide below the effective zone in the soil.

Precaution For Center Pivot Applications: Where sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control can occur. Where sprinkler distribution patterns overlap excessively, crop injury can occur.

Note: For information on applying in lower volumes of carrier, see **Low Carrier Application** section of this label.

CLEANING INSTRUCTIONS

- Do not use the same sprayer without thoroughly cleaning on sensitive crops; minute residues of **Sharda Metolachlor 86.4EC** in the tank can injure crops.
- Wash sprayer and spray equipment thoroughly with clean water immediately after use.
- Drain any remaining spray solution of **Sharda Metolachlor 86.4EC** from the spray tank and dispose of according to label disposal instructions.
- Rinse the spray tank and refill with water, adding 1 cup heavy-duty detergent per 20 gallons of water.
- Recycle this mixture through the equipment for 5 minutes, and spray out.
- Clean pump and nozzle screens thoroughly.
- Wash away any spray mixture from the outside of spray tank, nozzles or spray rig.
- Dispose of all rinse water in compliance with local, state, and Federal guidelines.

USE PRECAUTIONS

Where directions specify a **Sharda Metolachlor 86.4EC** tank mixture with AAtrex formulations, other brands of atrazine may be used. Follow the rates, instructions, and limitations on the AAtrex or respective atrazine product label if other brands of atrazine are used. Injury may occur following the use of **Sharda Metolachlor 86.4EC** under abnormally high soil moisture conditions during early development of the crop.

USE RESTRICTIONS

- Do not use in nurseries, turf, or landscape plantings.
- Do not apply under conditions which favor runoff or wind erosion of soil containing this product to non-target areas.
- Do not apply to impervious substrates such as paved or highly compacted surfaces.
- Do not use tail-water from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least $\frac{1}{2}$ inch of rainfall has occurred between application and the first irrigation.
- If **Sharda Metolachlor 86.4EC** is incorporated, any supplemental tillage before planting must not exceed the depth of incorporation.

Note: Certain states may have established rate limitations for atrazine within specific geographical areas. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.

Dry weather following pre-emergence application of **Sharda Metolachlor 86.4EC** or a tank mixture can reduce product efficacy.

Cultivate if weeds develop. Where reference is made to weeds partially controlled, partial control can either mean erratic control from good to poor or consistent control at a level below that generally considered acceptable for commercial weed control.

Sharda Metolachlor 86.4EC applied alone controls or partially controls the following weeds:

Barnyardgrass (watergrass)	Foxtail millet	Shattercane
Bristly foxtail	Galinsoga	Signalgrass (<i>Brachiaria</i>)
Carpetweed	Giant foxtail	Southwestern cupgrass
Common purslane	Goosegrass	Tall waterhemp
Common waterhemp	Green foxtail	Texas panicum
Crabgrass	Hairy nightshade	Volunteer sorghum
Crowfootgrass	Pigweed	Wild proso millet*
Eastern black nightshade	Prairie cupgrass	Witchgrass
Eclipta	Red rice	Woolly cupgrass*
Fall panicum	Robust foxtails (purple, white)	Yellow foxtail
Florida beggarweed	Sandbur	Yellow nutsedge
Florida pusley	Seedling johnsongrass	

† Partial control

*For control of these weeds in corn only, refer to the **Corn – Woolly Cupgrass and Wild Proso Millet Control Program** section of this label.

Refer to the **product information section. Weed control is erratic due partially to variable weather conditions.

Florida Beggarweed: Apply a minimum of 2 pints/acre pre-emergence for partial control.

Texas Panicum: Apply a minimum of 2 pints/acre using a center pivot irrigation system.

To improve weed control:

1. Till moist soil thoroughly to destroy germinating and emerged weeds. If **Sharda Metolachlor 86.4EC** is applied pre-plant incorporated, tillage may be used to incorporate **Sharda Metolachlor 86.4EC** if uniform 2-inch incorporation is achieved as specified in **Application Procedures**.
2. Plant crop into moist soil immediately after tillage. If **Sharda Metolachlor 86.4EC** is to be used pre-emergence, apply at planting or immediately after planting.
3. Irrigate ½ - 1 inch of water with a sprinkler system, if available, within 2 days of application. Irrigate with ½ inch water volume on coarse-textured soils, and 1 inch on fine-textured soils. Refer to the section on **Center Pivot Irrigation Application** for instructions with this application method.
4. If irrigation is impossible and rain does not occur within 2 days after planting and application, weed control may be decreased. Under these conditions, perform a shallow cultivation as soon as weeds emerge.

Rotational Crops:

Sharda Metolachlor 86.4EC Alone:

(1) If a crop treated with **Sharda Metolachlor 86.4EC** alone is lost, any crop on this label may be replanted immediately. If the original application was banded and the second crop is planted in the untreated row middles, make a second banded treatment.

Crop	Rotation Interval (months)
Alfalfa	4 months
Barley, oats, rye, wheat	4 ½ months
Clover	9 months
Tomatoes	6 months
All other crops	12 months

(2) Any crop on this label, in addition to root crops, tobacco, barley, buckwheat, milo, oats, rice, rye, wheat, cabbage, or peppers, may be planted in the spring following treatment.

(3) Following a lay-by treatment or multiple treatments applied the previous season, any crop on this label, in addition to tobacco, cabbage, or peppers, may be planted in the spring.

Restrictions:

- Do not make a second broadcast application of **Sharda Metolachlor 86.4EC**.
- Do not graze or feed forage or fodder from cotton to livestock.
- Alfalfa & clover: Do not apply more than 3 lbs. a.i. metolachlor per acre (3 pints **Sharda Metolachlor 86.4EC**) pre-emergence (including pre-plant surface, pre-plant incorporated, post-plant incorporated).
- Alfalfa & clover: Do not make lay-by and/or other post-emergence applications of **Sharda Metolachlor 86.4EC**.

Sharda Metolachlor 86.4EC Tank Mixtures: For **Rotational Crops** restrictions for **Sharda Metolachlor 86.4EC** used in tank mixtures, refer to the statements/restrictions above for **Sharda Metolachlor 86.4EC** and to the respective product labels of any mixing partner(s) for additional statements/restrictions.

CROPS

CORN (ALL TYPES)

Sharda Metolachlor 86.4EC ALONE

Make either pre-plant surface, pre-plant incorporated, pre-emergence, or lay-by applications using the rates specified.

1. Pre-plant Surface-Applied Application:

Refer to instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

a. Fall Application (Apply after September 30 in MN, ND, SD, WI and north of Route 30 in IA; Apply after October 15 north of Route 91 in NE and south of Route 30 in IA; Apply after October 31 north of Route 136 in IL): In all locations, apply to crop stubble after harvest when the sustained soil temperature at a 4-inch depth is less than 55°F and falling. In minimum-till or no-tillage systems on soils having greater than 2.5% organic matter, apply 1.67 - 2.0 pts./A on *medium-textured* and 2.0 pts./A on *fine-textured soils*. A tillage operation may precede the application. Minimize furrow and ridge formation in the tillage operations.

Restrictions:

- If a spring application is made, the sum total rate of fall and spring applications must not exceed the maximum total rate for corn.
- Do not apply to frozen ground.
- A fall and/or spring tillage may follow application, but do not exceed an incorporation depth greater than 2 - 3 inches.

Use of **Sharda Metolachlor 86.4EC** on medium- and fine-textured soils with minimum-tillage or no-tillage systems in CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, TN, WI, and WY:

- Apply 2/3 the specified labeled rate of **Sharda Metolachlor 86.4EC** (1.67 pts./A on *medium soils* and 2.0 pts./A on *fine soils*) as a split treatment 30 - 45 days before planting and the remainder at planting. Applications made less than 30 days prior to planting may be as either a split application or single treatment.
- Apply 1.33 pts./A on *coarse soils* not more than 2 weeks prior to planting.

On medium- and fine-textured soils with minimum- or no-tillage systems in CT, DE, MA, MD, ME, MI, NH, NY, OH, PA, RI, VA, VT, and WV, pre-plant surface applications may be applied following the directions for use above. If the amount of rainfall results in unsatisfactory length of weed control following the earlier treatment, a post-emergence application of an appropriately labeled broadleaf and/or grass weed herbicide may be used, i.e., AAtrex, Beacon®, Bicep®, Exceed®, Accent®, Banvel, Basagran®, bromoxynil (Brominal® or Butril®), or 2,4-D. Observe all directions for use, restrictions, precautions, and limitations on the post-emergent herbicide label.

Restriction: If the post-emergence treatment includes an herbicide used pre-plant surface-applied, do not exceed the total maximum specified rate for corn on a given soil texture.

2. Pre-Plant Incorporated or Pre-Emergence Applications:

Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Coarse soils: Apply 1.0 - 1.33 pts./A of **Sharda Metolachlor 86.4EC** if organic matter content is less than 3%, or 1.33 pts./A if organic matter content is 3% or greater.

Medium soils: Apply 1.33 - 1.67 pts./A of **Sharda Metolachlor 86.4EC**.

Fine soils: Apply 1.33 - 1.67 pts./A of **Sharda Metolachlor 86.4EC** if organic matter content is less than 3%, or 1.67 - 2.0 pts./A if organic matter content is 3% or greater.

Lay-by Applications:

To extend the duration of weed control in corn, apply the maximum rate of 2.0 pts. **Sharda Metolachlor 86.4EC** after corn emerges until the corn reaches 40 inches tall, following any pre-plant surface-applied, pre-plant incorporated, or pre-emergence herbicide application, including **Sharda Metolachlor 86.4EC**.

For best results, apply to soil free of emerged weeds and directed towards the base of corn plants in excess of 5 inches tall. The total **Sharda Metolachlor 86.4EC** rate applied on corn during any one crop year must not exceed 4 pts./A, depending on soil texture.

Corn Restrictions:

Do not graze or feed forage from treated areas for 30 days following application.

Shattercane, Wild Proso Millet, Woolly Cupgrass, and Eclipta – Partial Control:

Apply 1.0 - 1.33 pts./A of **Sharda Metolachlor 86.4EC** pre-plant incorporated followed by 1.0 - 1.33 pts./A of **Sharda Metolachlor 86.4EC** pre-emergence. Make pre-emergence application during or after planting, but before weeds and corn emerge. Apply the 1.33 pts./A rate of **Sharda Metolachlor 86.4EC** when a heavy infestation of shattercane, wild proso millet, woolly cupgrass, or eclipta is expected. Make a shallow cultivation to control any late emerging weeds.

Woolly Cupgrass and Wild Proso Millet Control:

Medium soils: Apply 1.67 pts./A Sharda Metolachlor 86.4EC early pre-plant, pre-plant incorporated, or pre-emergence.

Fine soils: Apply 2.0 pts./A up to the maximum specified label rate. Lightly incorporate with a rotary hoe if rainfall does not occur within 5 - 7 days

Apply a post-emergence tank mix of 0.38 oz./A Beacon or 1 packet per 4 acres Exceed plus Accent SP at 0.33 oz./A plus 1 qt. of crop oil concentrate plus 1 gal./A of 28% nitrogen, or the equivalent amount of ammonium sulfate, when the grasses are 2-3 inches tall and the corn is at least 4 inches tall

Cultivate 14-21 days after the post-emergence application.

Precautions:

Use up to 2.6 pts./A Sharda Metolachlor 86.4EC as either a pre-plant surface, pre-plant incorporated, or pre-emergence treatment on soils having an organic matter content between 6% and 20%.

If annual weeds escape following a pre-plant surface, pre-plant incorporated, or pre-emergence treatment of Sharda Metolachlor 86.4EC, follow with a post-emergence application of an appropriately labeled broadleaf and/or grass weed herbicide, i.e., AAtrex, Beacon, Bicep, Exceed®, Accent, Banvel, Basagran, Brominal, Butril, or 2,4-D. (3) Brominal or Butril may be applied post-emergence alone or in tank-mix combination with AAtrex.

Restrictions:

- Do not apply more than the specified labeled rate for a given soil texture per year, either as a single or split treatment.
- Do not use Sharda Metolachlor 86.4EC on peat or muck soils.
- If the post-emergence treatment includes the herbicide used in the earlier treatment, do not exceed the total labeled rate for corn on a given soil texture.
- Do not exceed 1.2 lbs. a.i./A of AAtrex in tank-mix combination with Brominal or Butril post-emergence.
- Refer to the AAtrex, Brominal, and Butril labels for specific rates and precautions.

Sharda Metolachlor 86.4EC COMBINATIONS

Sharda Metolachlor 86.4EC in any tank mixture for corn (except Sharda Metolachlor 86.4EC + AAtrex post-emergence and PARALLEL PCS + Banvel post-emergence) may be applied in water or fluid fertilizer. Use only water in the Sharda Metolachlor 86.4EC + AAtrex or the Sharda Metolachlor 86.4EC + Banvel post-emergence tank mixes.

Restriction:

- Do not graze or feed forage from treated areas for 30 days following application.

FOR TANK MIXTURES WITH AATREX (OR OTHER BRANDS OF ATRAZINE):

All the restrictions and rate limitations on the AAtrex label must be followed if more restrictive/protective than those on this label. In addition, if AAtrex is/must be applied at rates lower than those listed on this label, broadleaf weed control may be affected. Refer to the AAtrex label for weeds controlled at the reduced rates.

Sharda Metolachlor 86.4EC Tank Mixtures for Corn – Additional Weeds Controlled and Special Instructions

Tank Mix:	Weeds Controlled	Weeds Partially Controlled
Sharda Metolachlor 86.4EC +		
AAtrex and/or Princep (Preplant Surface, PPI, PRE)	Controls: Browntop panicum, Cocklebur, Common purslane, Hairy nightshade, Lambsquarters, Morningglory, Ragweed, Smartweed, Velvetleaf	
AAtrex (Post)	Controls: Jimsonweed, Kochia, Lambsquarters, Mustard, Prickly sida, Ragweed, Smartweed, Velvetleaf Partially controls: Cocklebur, Morningglory	
Banvel (Field Corn)	Controls: Lambsquarters, Ragweed, Smartweed Partially controls: Cocklebur, Jimsonweed, Morningglory, Velvetleaf	
AAtrex + Lorox	Controls: Browntop panicum, Cocklebur, Common purslane, Hairy nightshade, Lambsquarters, Morningglory, Pigweed, Ragweed, Smartweed, Velvetleaf	
AAtrex or Princep + Prowl	Controls: Browntop panicum, Cocklebur, Common purslane, Hairy nightshade, Lambsquarters, Morningglory, Pigweed, Ragweed, Smartweed, Velvetleaf	
Marksman	Controls: Cocklebur, Common purslane, Hairy nightshade, Jimsonweed, Kochia, Lambsquarters, Morningglory, Mustard, Pigweed, Prickly sida, Ragweed, Smartweed, Velvetleaf	

MIXING INSTRUCTIONS

Special Mixing Instructions for Sharda Metolachlor 86.4EC + AAtrex or Princep and Prowl:

- Fill the spray tank ¾ full with water or fluid fertilizer and start agitation.
- Add a compatibility agent at 4 pts./100 gals. spray mixture, such as Unite or X-77.
- Add the AAtrex or Princep and allow it to become dispersed.
- Add Sharda Metolachlor 86.4EC and Prowl 4E.
- Add the rest of the water.

Additional AAtrex Instructions:

- Although a single formulation for AAtrex or Princep is listed in the rate tables, other formulations may be substituted, using the following formula: 1 lb. of AAtrex Nine-O® or Princep Caliber 90® = 1.8 pts. of AAtrex 4L or Princep 4L.
- Although directions specify AAtrex formulations in tank mixture with **Sharda Metolachlor 86.4EC**, other brands of atrazine may be used. Follow the rates, specifications, and limitations on the atrazine label.
- See additional mixing instructions on the AAtrex label.

Restriction: Do not exceed a total of 2.5 lbs. a.i. of atrazine per acre per year. Certain states may have established rate limitations for atrazine within specific geographical areas. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.

Lorox Instructions: Other formulations of Lorox can be used: 1 lb. of Lorox DF = 1 pt. of Lorox L.

In minimum-tillage and no-tillage systems, mix with Gramoxone Extra for control of most emerged annual weeds and suppression of perennial weeds; or with Landmaster BW for suppression of emerged field bindweed and control or suppression of annual weeds; or with Roundup for control of most emerged annual and perennial weeds.

For specific directions for 2,4-D or Banvel burndown combinations, refer to **Tank Mixture with AAtrex; or AAtrex + 2,4-D; or AAtrex + 2,4-D + Banvel for Minimum-Tillage or No-Tillage Systems** label section.

Sharda Metolachlor 86.4EC in any tank mixture for corn may be applied in water or fluid fertilizer, except as follows:

Corn Restrictions:

For all applications to corn, do not graze or feed forage from treated areas for 30 days following application.

When applying **Sharda Metolachlor 86.4EC** in tank mixture with AAtrex, do not exceed a total of 2.5 lbs. a.i. of atrazine per acre per year. Refer to **Corn (All Types) – Sharda Metolachlor 86.4EC Alone**, for sequential post-emergence treatments if escape weeds develop.

1. Tank Mixture with AAtrex or Princep, or AAtrex + Princep – Pre-Plant Surface, Pre-Plant Incorporated, or Pre-Emergence

In addition to the weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC** + AAtrex or Princep, or **Sharda Metolachlor 86.4EC** + AAtrex + Princep, applied pre-plant surface, pre-plant incorporated, or pre-emergence, also controls the following weeds:

Browntop Panicum
Cocklebur
Common Purslane

Hairy Nightshade
Lambsquarters
Morningglory

Ragweed
Smartweed
Velvetleaf

Apply **Sharda Metolachlor 86.4EC** + AAtrex or Princep, or **Sharda Metolachlor 86.4EC** + AAtrex + Princep either pre-plant surface, pre-plant incorporated, or pre-emergence.

Pre-Plant Surface-Applied: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Procedures** and under application instructions for **Sharda Metolachlor 86.4EC** alone on corn. Apply **Sharda Metolachlor 86.4EC** + AAtrex or Princep, or **Sharda Metolachlor 86.4EC** + AAtrex + Princep on *medium soils* (1.67 pts./A of **Sharda Metolachlor 86.4EC** + 3.2 - 4 pts./A of AAtrex 4L or Princep 4L, or AAtrex 4L + Princep 4L combined) and on *fine soils* (1.67 - 2.0 pts./A of **Sharda Metolachlor 86.4EC** + 4 - 5 pts./A of AAtrex 4L or Princep 4L, or AAtrex 4L + Princep 4L combined) in minimum-tillage and no-tillage systems in CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, TN, WI, and WY. Apply the tank mixtures as a split or single treatment in those states and as indicated in the **Sharda Metolachlor 86.4EC Alone – Pre-plant Surface-Applied** section of the label for corn. On *coarse soils*, apply 1.33 pts./A of **Sharda Metolachlor 86.4EC** and 3.2 pts./A of AAtrex 4L or Princep 4L, or AAtrex 4L + Princep 4L combined.

Pre-Plant Incorporated or Pre-Emergence: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**. Apply **Sharda Metolachlor 86.4EC** in combination with AAtrex and using the appropriate rates from the **Sharda Metolachlor 86.4EC** + AAtrex or Princep, or **Sharda Metolachlor 86.4EC** + AAtrex + Princep, **Pre-Plant Incorporated or Pre-Emergence - Corn (All Types)** table.

Restriction: Do not apply more than the specified labeled rate for a given soil texture per year, either as a split or single treatment.

Shattercane and Wild Proso Millet – Partial Control

For more consistent partial control of shattercane or wild proso millet, where **Sharda Metolachlor 86.4EC** is applied in tank mixture or sequentially with other registered corn herbicides, make the following applications:

1. Apply 1.0 - 1.33 pts./A of **Sharda Metolachlor 86.4EC** + 2 lbs. a.i./A of AAtrex or Princep preplant incorporated, followed by 1.0 - 1.33 pts./A of **Sharda Metolachlor 86.4EC** pre-emergence. Make the pre-emergence application during or after planting, but before weeds and corn emerge.

2. Apply **Sharda Metolachlor 86.4EC** at 1.33 pts./A alone or in tank mix combination with up to 2 lbs. a.i./A of Aatrex or Princep, pre-plant incorporated. Do not exceed the total rate of triazine herbicide listed in combination with **Sharda Metolachlor 86.4EC** for corn grown on a given soil texture. Follow with a post-directed application of Evik® 80W at 1.67 lbs./A. Refer to the Evik 80W label for specific directions for the post-directed application.
3. Apply Eradicane® or Sutan® (or equivalent EPTC or butylate formulations) at labeled rates pre-plant incorporated, followed by a pre-emergence application of **Sharda Metolachlor 86.4EC** at 1.0 - 1.33 pts./A. Do not use Eradicane or Sutan on soils where rapid degradation has been shown to occur. Make the pre-emergence application during or after planting, but before weeds and corn emerge.

When following the application regimes in numbers 1-3 above, make a shallow cultivation after the pre-emergence or post-emergence application to control any late emerging shattercane or wild proso millet plants.

Restriction:

Do not exceed a total of 2 lbs. a.i./A of metolachlor (2 pts. of **Sharda Metolachlor 86.4EC**) in the pre-plant incorporated plus pre-emergence application on soils with less than 6% organic matter.

Sharda Metolachlor 86.4EC + Aatrex or Princep, or Sharda Metolachlor 86.4EC + Aatrex + Princep, Pre-Plant Incorporated or Pre-Emergence - Corn (All Types)

Do not use in muck or peat (soils with greater than 20% organic matter).

BROADCAST RATES PER ACRE				
SOIL TEXTURE	Less than 3% Organic matter		Greater than 3% Organic matter	
	Tank Mix: Sharda Metolachlor 86.4EC +			
	AAtrex Nine O or Princep Caliber 90*	AAtrex Nine O** or Princep Caliber 90**	AAtrex Nine O or Princep Caliber 90*	AAtrex Nine O** or Princep Caliber 90**
Coarse	0.85 – 1.0 pts. + 1.1-2.2 lbs.	0.85 – 1.0 pts. + 0.6 – 1.1 lbs. + 0.6 – 1.1 lbs.	1.0 pts. + 1.3 – 2.2 lbs.	1.0 pts. + 0.7 – 1.1 lbs. + 0.7 – 1.1 lbs.
Medium	1.0 – 1.33 pts. + 1.3-2.2 lbs.	1.0 – 1.33 pts. + 0.7 – 1.1 lbs. + 0.7 – 1.1 lbs.	1.33 pts. + 1.8 – 2.2 lbs.	1.33 pts. + 0.9 – 1.1 lbs. + 0.9 – 1.1 lbs.
Fine	1.33 pts. + 1.8 – 2.2 lbs.	1.33 pts. + 0.9 – 1.1 lbs. + 0.9 – 1.1 lbs.	1.33 – 1.67 pts. + 1.8 – 2.2 lbs.***	1.33 – 1.67 pts. + 0.9 – 1.1 lbs. + 0.9 – 1.1 lbs.

*Use Princep instead of Aatrex when heavy infestations of crabgrass or fall panicum are expected. On soils having between 6% and 20% organic matter, use up to 2.33 pts./A **Sharda Metolachlor 86.4EC** in tank mix combination with 2.2 lbs./A of Aatrex Nine-O, or equivalent rates of Aatrex 4L. Refer to the Aatrex label for weeds controlled at this reduced rate.

When using the tank mixture of **Sharda Metolachlor 86.4EC + Aatrex Nine-O + Princep Caliber 90, use equal rates of each as shown when heavy broadleaf weed infestations are expected. When heavy infestations of crabgrass or fall panicum are expected, use a 1:2 ratio of Aatrex + Princep instead of the 1:1 ratio given in the **Sharda Metolachlor 86.4EC + Aatrex or Princep, or Sharda Metolachlor 86.4EC + Aatrex + Princep, Pre-plant Incorporated or Pre-emergence - Corn (All Types)** table.

(Example: Total Aatrex Nine-O + Princep Caliber 90 = 1.2 lbs./A, use 0.4 lb. of Aatrex + 0.8 lb. of Princep, respectively.)

***For cocklebur, yellow nutsedge, and velvetleaf control on *fine-textured soils* above 3% organic matter, apply 2.25 lbs./A of Aatrex Nine-O, or equivalent rates of Aatrex 4L, or the same total amount of Aatrex + Princep with 1.33 - 1.67 pts./A of **Sharda Metolachlor 86.4EC**.

2. Tank Mixture with Aatrex – Post-emergence

Weeds Controlled			Weeds Partially Controlled		
Barryardgrass (watergrass)	Yellow foxtail	Prickly sida	Cocklebur	Morningglory	Yellow Nutsedge
Crabgrass	Jimsonweed	Purslane			
Crowfootgrass	Kochia	Ragweed			
Fall panicum	Lambsquarters	Smartweed			
Giant foxtail	Mustard	Velvetleaf			
Green foxtail	Pigweed				

Coarse soils: Apply 1.0 pts./A of **Sharda Metolachlor 86.4EC** + 1.3 lbs./A of AAtrex Nine-O*.

Medium soils: 1.33 pts./A of **Sharda Metolachlor 86.4EC** + 1.8 lbs./A of AAtrex Nine-O.

Fine Soils: 1.33 - 1.67 pts./A of **Sharda Metolachlor 86.4EC** + 1.8 - 2.2 lbs./A** of AAtrex Nine-O. Apply this tank mixture before grass and broadleaf weeds pass the 2-leaf stage and before corn exceeds 5" tall. Application to weeds larger than the 2-leaf stage will generally result in unsatisfactory control.

*When using AAtrex 4L, use equivalent rates. One lb. of AAtrex Nine-O equals 1.8 pts. of AAtrex 4L.

For better control of cocklebur, morningglory, velvetleaf, and yellow nutsedge on *fine-textured soils* above 3% organic matter, apply 2.2 lbs./A of AAtrex Nine-O, or equivalent rate of AAtrex 4L, with 1.33 - 1.67 pts./A of **Sharda Metolachlor 86.4EC.

Lay-by Applications:

Apply to corn plants less than 12" tall. Direct applications to corn in >5" tall to the base of the corn plants. Apply over the top to corn plants <5" tall. Corn leaf burn can occur, but impact growth or yield.

Tank mixtures of **Sharda Metolachlor 86.4EC** + AAtrex can be applied following application of any registered pre-plant surface applied, pre-plant incorporated, or pre-emergence corn herbicide, including **Sharda Metolachlor 86.4EC** + AAtrex.

Restrictions:

- Do not exceed 4 pints of **Sharda Metolachlor 86.4EC**.
- Do not exceed 2.5 lbs. a.i./A AAtrex during any one crop year.
- Do not apply this post-emergence tank mixture in fluid fertilizer.
- Refer to the AAtrex label for geographic, soil-texture, and rotational restrictions.

Tank Mixture with Banvel

Restrictions:

- Do not allow **Sharda Metolachlor 86.4EC** to drift to non-target plants such as soybeans during application.
- Do not apply with aircraft.
- Do not apply on *coarse soils* or on soils with less than 2.5% organic matter.
- Do not incorporate before corn emerges.

Pre-Emergence: Use this tank mixture only on field corn which is flat-planted (no furrows) in CO, IA, IL, IN, KS, MN, NE, OH, SD, and WI. In addition to the weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC** + Banvel, applied pre-emergence controls lambsquarters, ragweed, smartweed, and partially controls cocklebur, jimsonweed, morningglory, and velvetleaf.

Apply **Sharda Metolachlor 86.4EC** + Banvel pre-emergence.

Medium soils: Broadcast 1 pt./A of Banvel with 1.33 pts./A of **Sharda Metolachlor 86.4EC**.

Fine soils: 1.33 - 1.67 pts./A of **Sharda Metolachlor 86.4EC** tank mixture to the soil surface at planting or after planting, but before corn emerges. Plant corn at least 1½" deep and apply behind planting equipment, avoiding incorporation by the planter wheel or other seed covering device. If it is necessary to rotary hoe to break the soil crust, do not disturb the soil more than ½" inch deep.

Post-Emergence for Control of Pigweed (Mid-Atlantic states, including DE, MD, PA, VA, and WV)

Apply 1.0 - 1.50 pts. of **Sharda Metolachlor 86.4EC** + 0.5 - 1 pt./A of Banvel or 1 - 2 pts./A of Banvel II by ground equipment when pigweed plants are <3" tall and before corn >5" tall in a minimum of 20 gals. Of spray per acre. Use the lower rate within the specified rate range on coarse-textured and low organic matter soils. Use the higher rate on fine textured and high organic matter soils.

Tank Mixture with AAtrex and Lorox to Control of Lambsquarters and Pigweed

For prolonged control of lambsquarters and pigweed in DE, MD, NJ, NY, PA, VA, and WV, apply **Sharda Metolachlor 86.4EC** pre-emergence in tank mix combination with AAtrex + Lorox. Apply **Sharda Metolachlor 86.4EC** and AAtrex according to the rates specified in the **Sharda Metolachlor 86.4EC** + AAtrex or Princep, or **Sharda Metolachlor 86.4EC** + AAtrex + Princep, Pre-Plant Incorporated or Pre-Emergence - Corn (All Types) table and Lorox according to the following rates:

SOIL TEXTURE & BROADCAST RATE PER ACRE:

Sandy loam (1 - 3% organic matter): 0.67 lb. Lorox

Sandy loam (3 - 6% organic matter): 1.0 lb. Lorox

Medium- and fine-textured soils (1-6% organic matter): 1.0 lb. Lorox

Observe all directions for use, restrictions, precautions, and limitations on the **Sharda Metolachlor 86.4EC**, AAtrex, and Lorox labels when applying these products in tank mix combinations.

Tank Mixture with AAtrex or Princep + Prowl for Prolonged Control of Lambsquarters and Pigweed in Field Corn Only (Northeast U.S., including MI, IN, KY, and States East of These)

For prolonged control of lambsquarters, pigweed, and other annual broadleaf and grass weeds, apply **Sharda Metolachlor 86.4EC** in tank mix combination with AAtrex* or Princep + Prowl 4E after planting but before corn or weeds emerge. Apply using ground equipment in a minimum of 10 gals. water or 20 gals. liquid fertilizer. Apply by air in a minimum of 5 gals. water. Refer to the **Sharda Metolachlor 86.4EC** + AAtrex or Princep, or **Sharda Metolachlor 86.4EC** + AAtrex + Princep, Pre-Plant Incorporated or Pre-Emergence

- **Corn (All Types)** table for rates of **Sharda Metolachlor 86.4EC**, AAtrex, or Princep to be applied. Apply Prowl 4E according to the following rates in the, **Prowl 4E – Broadcast Rates Per Acre** table.

Restriction: Do not apply **Sharda Metolachlor 86.4EC** in tank mix combination with AAtrex 80W + Prowl, as this combination is incompatible. Other AAtrex formulations may be used.

Prowl 4E – Broadcast Rates Per Acre

Percent Organic Matter in Soil	Coarse Soil	Medium Soil	Fine Soil
<1.5%	1.5-2.0 pts.	2.0 pts.	2.0 pts.
1.5 – 3%	2.0 pts.	3.0 pts.	3.0 pts.
>3%	3.0 pts.	3.0 pts.	3.0 pts.

Observe all directions for use, restrictions, precautions, and limitations on the respective product labels when applying these products in tank mix combination. Refer to the Prowl 4E label for replanting instructions in the event of crop loss.

Tank Mixture with AAtrex* or Princep, AAtrex + Princep, with Gramoxone Extra, Landmaster BW, or Roundup for Minimum-Tillage or No-Tillage Systems

In minimum-tillage or no-tillage systems where corn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Extra, Landmaster BW, or Roundup may be added to a tank mix of **Sharda Metolachlor 86.4EC** + AAtrex or Princep, or **Sharda Metolachlor 86.4EC** + AAtrex + Princep. The **Sharda Metolachlor 86.4EC** + AAtrex or Princep, or **Sharda Metolachlor 86.4EC** + AAtrex + Princep portion of the tank mixture provides pre-emergence control of the weeds listed on this label in the tank mixture section for **Sharda Metolachlor 86.4EC** + AAtrex or Princep, or **Sharda Metolachlor 86.4EC** + AAtrex + Princep – Pre-plant Surface, Pre-Plant Incorporated, or Pre-Emergence.

Application: Apply before, during, or after planting, but before the corn emerges, at the rates specified below. Add Gramoxone Extra, Landmaster BW, or Roundup at the following broadcast rates:

Gramoxone Extra: 1.5 - 2.0, 2.0 - 2.5, or 2.5 - 3.0 pts./A to 1 - 3 inches, 3 - 6 inches, or 6-inch tall weeds, respectively. Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50 - 74% nonionic active ingredient, respectively. This treatment will not control weeds greater than 6" tall.

Restriction: Do not apply combinations containing Gramoxone Extra in suspension-type liquid fertilizers because the activity of paraquat will be reduced.

Landmaster BW: 27 - 54 oz./A depending on weed species and size. See the Landmaster BW label for weeds controlled, rates for specific weeds, and other information concerning use.

Roundup: See the Roundup or Roundup RT label for weeds controlled, rates, and other use directions. Apply in 20 - 60 gals. of water or fluid fertilizer per acre with ground equipment.

Coarse soils: Apply 1.0 pts./A of **Sharda Metolachlor 86.4EC** with 1.3 lbs. of AAtrex Nine-O* or Princep Caliber 90*, or with 0.7 lb. of AAtrex Nine-O** + 0.7 lb. of Princep Caliber 90**.

Medium soils: Apply 1.33 pts./A of **Sharda Metolachlor 86.4EC** with 1.8 lbs. of AAtrex Nine-O or Princep Caliber 90, or with 0.9 lb. of AAtrex Nine-O + 0.9 lb. of Princep Caliber 90.

Fine soils*:** Apply 1.33 - 1.67 pts./A of **Sharda Metolachlor 86.4EC** with 1.8-2.2 lbs. of AAtrex Nine-O or Princep Caliber 90, or with 0.9 - 1.1 lbs. of AAtrex Nine-O + 0.9 - 1.1 lbs. of Princep Caliber 90.

*Use Princep in preference to AAtrex when heavy infestations of crabgrass or fall panicum are expected.

When using the tank mixture of **Sharda Metolachlor 86.4EC + AAtrex Nine-O + Princep Caliber 90, use equal rates of AAtrex and Princep as shown when heavy broadleaf weed infestations are expected. When heavy infestations of crabgrass or fall panicum are expected, use a 1:2 ratio of AAtrex + Princep instead of the 1:1 ratio given.

(Example: Total AAtrex Nine-O + Princep Caliber 90 = 1.8 lbs./A, use 0.6 lb. of AAtrex + 1.2 lbs. of Princep, respectively.)

***For cocklebur, yellow nutsedge, and velvetleaf control on *fine-textured soils* above 3% organic matter, apply 2.25 lbs./A of AAtrex Nine-O, or equivalent rate of AAtrex 4L, or the same total amount of AAtrex + Princep, with 1.33 - 1.67 pts./A of **Sharda Metolachlor 86.4EC**.

Tank Mixture with AAtrex; or AAtrex + 2,4-D; or AAtrex + 2,4-D + Banvel for Minimum-Tillage or No-Tillage Systems

In minimum-tillage or no-tillage systems where corn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, applying **Sharda Metolachlor 86.4EC** in combination with AAtrex will kill most emerged small annual weeds. Apply **Sharda Metolachlor 86.4EC** + AAtrex before, during, or after planting, but before corn emerges, according to the rates in the **Sharda Metolachlor 86.4EC** + AAtrex or Princep, or **Sharda Metolachlor 86.4EC** + AAtrex + Princep, Pre-Plant Incorporated or Pre-Emergence - Corn (All Types) table.

Where heavy crop residues exist, add 0.8 - 1.6 pts./A of an appropriately labeled 3.8 lbs. a.i./gal. 2,4-D amine (such as Weedar 64, Weedar 64A, DMA-4 Herbicide, or Formula 40) to the spray tank last and apply in a minimum of 25 gals. carrier per acre.

As carriers, nitrogen solutions and complete liquid fertilizers, applied before corn emergence, enhance burndown of existing weeds, and therefore, are recommended instead of water. Add X-77 surfactant at 1.0 - 2.0 qts./100 gals. of diluted spray, or another appropriate surfactant at its labeled rate, or add crop oil concentrate plus 28% liquid nitrogen (or equivalent). Apply before weeds exceed 3" tall. If alfalfa is present, add Banvel to the spray mixture at 0.33 - 0.5 pt./A and apply before alfalfa exceeds 6" tall.

For fields with existing sod grasses (e.g., bromegrass, orchardgrass, rye, or timothy), when existing weeds exceed 3" tall or when very dry conditions exist, add Gramoxone Extra at the rate of 1.67 pts./A in place of or in addition to 2,4-D, as indicated above. Do not apply Gramoxone Extra in suspension-type liquid fertilizer. Observe all directions for use, restrictions, precautions, and limitations on the respective product labels when applying these products in tank mix combination.

Tank Mixture with Marksman in Conservation Tillage - Field and Silage Corn

In conservation tillage systems where corn is planted directly into a cover crop or previous crop residue, **Sharda Metolachlor 86.4EC** + Marksman will kill most emerged small annual weeds. Apply **Sharda Metolachlor 86.4EC** + Marksman before, during, or after planting, but before corn emergence on *medium* and *fine* soils with greater than 2.5% organic matter. For fields with existing vegetation exceeding 3" tall or when very dry conditions exist, add Gramoxone Extra at its standard rate. Apply **Sharda Metolachlor 86.4EC** + Marksman post-emergence to corn <3" tall and before weedy grasses exceed the 2-leaf stage.

As carriers, nitrogen solutions and complete liquid fertilizers, applied before corn emergence, enhance burndown of existing weeds.

Restriction: Do not apply Gramoxone Extra in suspension-type liquid fertilizer or use on emerged corn. Refer to the Marksman label and follow all directions, limitations, restrictions, precautions, and instructions regarding application and use in corn.

Tank Mixture with Broadstrike® + Sharda Metolachlor 86.4EC

For pre-plant surface, pre-plant incorporated, or pre-emergence application where severe grass populations are expected on medium- or fine-textured soils with relatively high organic matter content, Broadstrike + **Sharda Metolachlor 86.4EC** may be spiked with **Sharda Metolachlor 86.4EC** for optimum performance. Refer to the Broadstrike + **Sharda Metolachlor 86.4EC** label for its use rate and the amount of metolachlor active ingredient it contains. **Sharda Metolachlor 86.4EC** may be added up to, but not to exceed, the maximum alone **Sharda Metolachlor 86.4EC** label rate for the soil classification. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

COTTON

Sharda Metolachlor 86.4EC ALONE

Application: Apply **Sharda Metolachlor 86.4EC** pre-emergence only in AR, LA, MS, TN, and Bootheel of MO.

Sandy loam: Apply 0.75-1.0 pt./A.

Medium & Fine soils: Apply 1.0-1.33 pts./A.

Apply **Sharda Metolachlor 86.4EC** pre-plant incorporated or pre-emergence in NM, OK, and TX.

Sandy loam: Apply 1.0 pt./A.

Medium soils: 1.0-1.33 pts./A.

Fine soils: 1.33 pts./A.

Apply 0.75-1.33 pts./A **Sharda Metolachlor 86.4EC** post-emergence to cotton and pre-emergence to weeds according to the state rate limitations in the **Post-emergence** section.

Restriction: Do not use on sand and loamy sand.

Pre-Plant Incorporated (NM, OK, and TX Only):

Apply to the soil and incorporate into the top inch of soil immediately before planting, at planting, or after planting but before crop or weeds emerge. Use a rolling cultivator or similar implement to uniformly incorporate not more than 1 inch deep. Use a pre-plant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. Wet the top of the bed where furrow irrigation is used. If the crop is to be planted on beds, apply and incorporate after bed formation. Plant cotton below the zone of incorporation; i.e., at least 1 inch on fine soils and 1.5 inches on coarse and medium soils. If incorporated prior to planting, use a planter that will result in a minimum of soil disturbance.

Note: For optimal control of yellow nutsedge and suppression of seedling johnsongrass, apply **Sharda Metolachlor 86.4EC**. Pre-plant incorporated at the maximum rate within the specified rate range for the soil texture, whether applied alone or mixed with Caparol 4L.

Pre-Emergence: Apply to the soil surface at planting or after planting but before weeds or crop emerge.

Post-Emergence: Apply **Sharda Metolachlor 86.4EC** broadcast over-the-top or directed to the soil surface, according to the rate and cotton height limitations listed below by state. Application before weeds emerge or after clean cultivation to remove existing weeds is necessary since **Sharda Metolachlor 86.4EC** will not control emerged weeds. **Sharda Metolachlor 86.4EC** post-emergence may be

applied over any previous registered herbicide treatment. In sprinkler-irrigated areas, sprinkler-irrigate after application with ½-1 inch of water (½ inch on coarse-textured soils to 1 inch on fine-textured soils) to incorporate **Sharda Metolachlor 86.4EC**. In furrow-irrigated areas, apply **Sharda Metolachlor 86.4EC**, incorporate with a rolling cultivator or similar implement that provides uniform shallow incorporation (2 inches or less), and then irrigate. In non-irrigated areas, if at least ½ inch of rainfall does not occur within 10 days after application, cultivate with a rolling cultivator or similar implement that provides uniform shallow incorporation of **Sharda Metolachlor 86.4EC**.

State Specific Restrictions:

VA, NC, SC, GA, FL, and AL: Apply 1.0-1.33 pts./A **Sharda Metolachlor 86.4EC** when cotton is 3-6" tall.

TN, AR, MS, MO, and LA: Apply 0.75-1.33 pts./A **Sharda Metolachlor 86.4EC** when cotton is 3-12" tall.

TX, OK, NM, AZ, CA, and Clay Soils in AR: Apply 1.0-1.33 pts./A **Sharda Metolachlor 86.4EC** when cotton is 3-12" tall but before August 1.

Multiple Applications:

If weed pressure is heavy, difficult to control species are present and/or expected, or reinfestation occurs, and a weed control program is used, multiple applications of **Sharda Metolachlor 86.4EC** are effective when used as part of the weed control program. Apply as a pre-plant incorporated or pre-emergence treatment and follow with an application post-emergence to cotton before weeds emerge or after clean cultivation to remove existing weeds, since **Sharda Metolachlor 86.4EC** will not control emerged weeds. Cotton must be at least 3" tall at the post-emergence timing. Apply **Sharda Metolachlor 86.4EC** post-emergence over a previous pre-plant or pre-emergence **Sharda Metolachlor 86.4EC** application as shown in the following table.

State	Multiple Sharda Metolachlor 86.4EC Applications to Cotton		
	Pre-Plant Incorporated or Pre-Emergence Pts./A		Post-Emergence and Height Pts./A
MS, LA, TN, AR, MO	0.75-1.33 (Pre-Emergence only)	+	0.75 – 1.33 to 3-12" Cotton
TX, OK, NM	1.0 – 1.33		1.0 – 1.33 to 3-12" Cotton before Aug. 1
NC & VA	1.0 – 1.33 (Pre-Emergence only)		1.0 – 1.33 to 3-12" Cotton

In sprinkler-irrigated areas, sprinkler irrigate after application with ½ -1" of water (½" on coarse textured soils to 1" on fine-textured soils) to incorporate **Sharda Metolachlor 86.4EC**. In furrow-irrigated areas, apply **Sharda Metolachlor 86.4EC**, incorporate with a rolling cultivator or similar implement that provides uniform shallow incorporation (2" or less), and then irrigate. In non-irrigated areas, if at least ½" rainfall does not occur within 10 days after application, cultivate with a rolling cultivator or similar implement that provides uniform shallow incorporation of **Sharda Metolachlor 86.4EC**.

Note: For best control of yellow nutsedge and suppression of seedling johnsongrass, apply **Sharda Metolachlor 86.4EC** pre-plant incorporated, pre-emergence, or post-emergence to cotton and pre-emergence to weeds at the maximum rate within the specified rate range for the soil texture, whether applied alone or in combinations. Do not apply more than a total of 2.0 pts./A on coarse soils or 4 pts./A of **Sharda Metolachlor 86.4EC** on medium and fine soils during a growing season. These treatments may be applied over previous registered herbicide treatments.

Restrictions:

- Do not apply **Sharda Metolachlor 86.4EC** on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed.
- Do not make broadcast applications of **Sharda Metolachlor 86.4EC** to cotton planted in furrows more than 2 inches deep. Make band applications to cotton planted in furrows deeper than 2 inches, but band width must not exceed the width of the bottom of the furrow.
- Do not apply **Sharda Metolachlor 86.4EC** post-emergence until after first "knifing" or cultivation to level soil surface.
- Do not apply over-the-top in fluid fertilizer or any other adjuvant, surfactant, oil, or other pesticide not listed in the cotton section of this label.
- Do not graze or feed forage or fodder from cotton to livestock.
- Do not apply on Taloka silt loam.
- Do not use in Gaines County, TX.

Sharda Metolachlor 86.4EC COMBINATIONS

Tank Mixture with Caparol 4L

Apply **Sharda Metolachlor 86.4EC** tank mixtures with Caparol 4L pre-plant incorporated or pre-emergence in water or fluid fertilizer. When fluid fertilizer is used as a carrier for **Sharda Metolachlor 86.4EC**, either alone or in combination with Caparol 4L, mix only the amount that will be sprayed in one operation. Do not allow mixtures to stand without agitation. Only water may be used as a carrier for post-emergence directed application.

In addition to those weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC** + Caparol 4L, applied pre-plant incorporated or pre-emergence, controls the following weeds:

Annual morningglory
Groundcherry

Junglerice
Lambsquarters

Mustard
Prickly sida (teaweed)

Ragweed
Shallow-germinating seeds

Hairy night shade

Malva

Purslane

of cocklebur & coffeeweed
Wild oats

As a post-emergence directed application, Caparol provides post-emergence control and residual control of weeds on its label, while **Sharda Metolachlor 86.4EC** provides residual control of weed species on its label. **Sharda Metolachlor 86.4EC** will not control emerged weeds.

Pre-Plant Incorporated or Pre-Emergence:

Apply **Sharda Metolachlor 86.4EC** + Caparol 4L, either pre-plant incorporated or pre-emergence, using the appropriate rate from the **Sharda Metolachlor 86.4EC + Caparol 4L – Cotton (NM, OK, TX)** table. Plant cotton below the zone of incorporation; i.e., at least 1" on fine soils and 1½" on coarse and medium soils. If incorporated before planting, use a planter that will result in a minimum soil disturbance.

Sharda Metolachlor 86.4EC + Caparol 4L – Cotton (NM, OK, TX)

Do not use on sand, loamy sand soils.

USE AREAS	SOIL TEXTURE	BROADCAST RATES PER ACRE	
		Sharda Metolachlor 86.4EC	Caparol 4L
OK, and Blacklands and Gulf Coast of TX	Loams	0.85 - 1.33 pts.	2.4 pts.
	Clays	1.33 pts.	4.8 pts.
Rio Grande Valley of TX	Loams	0.85 - 1.33 pts.	3.2 pts.
	Clays	1.33 pts.	4.8 pts.
NM; High Plains, Rolling Plains, Edwards Plateau of TX; and Southwest TX	Sandy loam	0.85 - 1.0 pt.	1.6 pts.
	Loams	0.85 - 1.33 pts.	2.4 pts.
	Sandy clay loam	1.33 pts.	2.4 pts.
	Other clay soils	1.33 pts.	3.2 pts.

Post-Emergence-Directed (AR, AZ, CA, LA, MS, NM, OK, TN, TX, and MO): Tank mix **Sharda Metolachlor 86.4EC** with Caparol 4L in water and apply post-emergence in cotton to control emerged weeds listed on the Caparol 4L label and residual pre-emergence control of weeds controlled by **Sharda Metolachlor 86.4EC** and Caparol 4L or apply after cultivation for residual pre-emergence control. These treatments may be applied over previous registered treatments, including **Sharda Metolachlor 86.4EC**; however, the maximum label rate of any product must not be exceeded. **Do not apply over-the-top of cotton.**

Apply **Sharda Metolachlor 86.4EC** + Caparol 4L in a minimum of 20 gals. of spray volume per acre. Follow the directions, limitations, restrictions and precautions on the Caparol 4L label when Caparol is applied as a post-emergence directed application. Refer to the directions, limitations, and precautions for use of **Sharda Metolachlor 86.4EC** under the **Cotton-Sharda Metolachlor 86.4EC Alone-Post-Emergence** section.

Restrictions:

- Do not make broadcast applications of **Sharda Metolachlor 86.4EC** + Caparol 4L to cotton planted in furrows deeper than 2". Make band applications to cotton planted in furrows deeper than 2", but band width must not exceed the width of the bottom of the furrow.
- Do not apply on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed.
- Do not graze or feed forage or fodder from cotton to livestock.
- Do not apply to glandless cotton varieties.
- Do not apply on Taloka silt loam.
- Do not use in Gaines County, TX.
- Do not apply in cut areas of newly leveled fields, or in areas of excess salt.
- Refer to the Caparol 4L label for further instructions and limitations.

Tank Mixture with Cotoran DF

Tank mix **Sharda Metolachlor 86.4EC** + Cotoran DF pre-emergence to control weeds controlled by **Sharda Metolachlor 86.4EC** alone, and those as listed on the Cotoran DF label. This combination control spotted spurge, hyssop spurge, nodding spurge, and prostrate spurge. Apply to the soil surface at planting or after planting but before weeds or crop emerge, using the appropriate rates from the **Sharda Metolachlor 86.4EC + Cotoran DF-Cotton** table. Apply the tank mixture post-emergence to cotton but pre-emergence to weeds, or apply post-emergence to both cotton and broadleaf weeds for control of weeds on the Cotoran label. Apply as a directed, semi-directed, or over-the-top spray. **Sharda Metolachlor 86.4EC** will not control emerged weeds but will provide pre-emergence control of species on its label.

Mixing Instructions: Incompatibility can occur when tank mixing **Sharda Metolachlor 86.4EC** with Cotoran DF. To avoid incompatibility:

- Fill the spray tank ¼ full with water or fluid fertilizer and start agitation.
- Add Cotoran DF and allow it to become dispersed.
- Add X-77 at 0.5% volume/volume final spray (4 pts./100 gals.)
- Add **Sharda Metolachlor 86.4EC**.
- Add the rest of the water or fluid fertilizer.

- Agitate during mixing and application to maintain a uniform suspension.

Restriction:

- Do not use fluid fertilizer as a carrier for post-emergence applications.

Sharda Metolachlor 86.4EC + Cotoran DF-Cotton

Do not use on sand, loamy sand soils.

USE AREAS	SOIL TEXTURE	BROADCAST RATES PER ACRE	
		Sharda Metolachlor 86.4EC	COTORAN DF*
AR, LA, MS, Bootheel of MO & TN	Sandy loam	0.75 - 1.0 pts.	1.2 lbs.
	Loam, silt, silt loam	1.0 - 1.33 pts.	1.2 - 1.9 lbs.
	Fine	1.0 - 1.33 pts.	1.9 - 2.4 lbs.
Eastern OK, Gulf Coast, Rio Grand Valley & Eastern TX	Sandy loam	0.85 - 1.0 pts.	1.2 lbs.
	Loam, silt, silt loam	1.0 - 1.33 pts.	1.2 - 1.9 lbs.
	Fine	1.33 pts.	1.9 - 2.4 lbs.

***When using Cotoran 4L, use equivalent rates. Multiply lbs. of Cotoran DF by 1.7 to get pts. of Cotoran 4L.

Post-Emergence: Apply this tank mixture post-emergence to cotton but pre-emergence to weeds or post-emergence to both cotton and weeds for control of weeds on the Cotoran label. Apply as a directed, semi-directed, or over-the-top spray. **Sharda Metolachlor 86.4EC** will not control emerged weeds but will provide pre-emergence control of species on its label. Apply when cotton is in the 3-12" stage. Where rate ranges are given for Cotoran DF, use the higher rate within the specified rate range when applying post-emergence to weeds that are 2" or less. These treatments may be applied over previous registered treatments, including **Sharda Metolachlor 86.4EC**, provided the maximum label rate of any product is not exceeded.

Restrictions:

- Do not apply **Sharda Metolachlor 86.4EC + Cotoran** on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed.
- Do not make broadcast applications of **Sharda Metolachlor 86.4EC + Cotoran** to cotton planted in furrows more than 2" deep. Band applications may be made to cotton planted in furrows deeper than 2 inches, but band width must not exceed the width of the bottom of the furrow.
- Do not use on Taloka silt loam.
- Do not feed treated forage or gin trash to livestock or graze treated areas.
- Do not use in Gaines County, TX.

Refer to the Cotoran labels for further instructions, restrictions, precautions, and limitations.

Tank Mixture of Sharda Metolachlor 86.4EC or Sharda Metolachlor 86.4EC + Cotoran with Gramoxone Extra or Roundup for Minimum-Tillage or No-Tillage Systems

In minimum-tillage or no-tillage systems where cotton is planted directly into a cover crop, stale seedbed, or previous crop residues, the contact herbicides Gramoxone Extra or Roundup may be added to a tank mix of either **Sharda Metolachlor 86.4EC** or **Sharda Metolachlor 86.4EC + Cotoran**. When used as directed, the Gramoxone Extra portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds. Roundup combinations will control emerged annual and perennial weeds when applied as directed on the Roundup label. The **Sharda Metolachlor 86.4EC** and **Sharda Metolachlor 86.4EC + Cotoran** portion of the tank mixture provides pre-emergence control of the weeds listed on this label in the **Sharda Metolachlor 86.4EC** and **Sharda Metolachlor 86.4EC + Cotoran** sections, respectively.

Refer to the label of each product used in combination and observe the planting details, information regarding application, geographical restrictions, and all other precautions and limitations. Refer to **Mixing Instructions** under the **Tank Mixture with Cotoran DF** section.

Application Instructions:

Apply before, during, or after planting, but before the cotton emerges. Apply 0.85-1.0 pts./A **Sharda Metolachlor 86.4EC** on sandy loams, medium-, and fine-textured soils. Refer to the **Sharda Metolachlor 86.4EC + Cotoran DF-Cotton** table for the Cotoran DF rates.

Add Gramoxone Extra or Roundup at the following broadcast rates:

Gramoxone Extra: 1.5-2.0, 2.0-2.5, or 2.5-3.0 pts./A to 1-3", 3-6", or 6" tall weeds, respectively.

Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50-74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6".

Restriction:

- Do not apply combinations containing Gramoxone Extra in suspension-type liquid fertilizers as the activity of paraquat will be reduced.

Roundup: See the Roundup label for weeds controlled, rates, and other use directions.

Heavy rains soon after application can result in crop injury, especially in poorly drained areas, where water stands for several days, or where the seeding slit has not been properly closed.

Restrictions:

- Do not apply **Sharda Metolachlor 86.4EC** + Cotoran 4L + Roundup in tank mixture because of compatibility problems.
- Do not use in Gaines County, TX.

Refer to the Cotoran labels and the **Tank Mixture with Cotoran DF** section of this label for further instructions, restrictions precautions, and limitations.

Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.

Tank Mixture with MSMA, MSMA + Caparol, or MSMA + Cotoran

Tank mix **Sharda Metolachlor 86.4EC** with MSMA in water and apply post-emergence control of emerged weeds listed on the MSMA product label and residual pre-emergence control of weeds controlled by **Sharda Metolachlor 86.4EC**. The addition of Caparol or Cotoran will add control of weed species on their respective labels.

Post-Emergence-Directed (AR, AZ, CA, LA, MS, NM, OK, TN, TX, and Bootheel of MO): Apply **Sharda Metolachlor 86.4EC** + MSMA post-emergence-directed to 3-12" cotton according to the directions, limitations, restrictions and precautions on the MSMA product label, as well as the directions, limitations, and precautions for use of **Sharda Metolachlor 86.4EC** in the section for **Cotton-Sharda Metolachlor 86.4EC Alone-Post-emergence**. These treatments can be applied over previous registered treatments, including **Sharda Metolachlor 86.4EC**; however, the maximum label rate of any product must not be exceeded. Cotoran or Caparol may be added to the **Sharda Metolachlor 86.4EC** + MSMA tank mixture according to the respective label directions for application to 3-12" cotton. When these mixtures are used, follow the mixing instructions for **Sharda Metolachlor 86.4EC** + Caparol or Cotoran and then add the MSMA product.

Restrictions:

- Do not use **Sharda Metolachlor 86.4EC** in tank mix with premixes of MSMA plus herbicides other than those registered for use in tank mixture with **Sharda Metolachlor 86.4EC** on cotton.
- Do not apply after first cotton bloom.

PEANUTS

Sharda Metolachlor 86.4EC ALONE

Apply **Sharda Metolachlor 86.4EC** pre-plant incorporated, post-plant incorporated, pre-emergence, or lay-by using the rates specified below.

Pre-Plant Incorporated or Pre-Emergence: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Post-Plant Incorporated: Apply and shallowly incorporate **Sharda Metolachlor 86.4EC** into the soil after planting but before peanut germination. Keep incorporation depth and incorporating implements above the seed or seed will be damaged.

Lay-by: Apply **Sharda Metolachlor 86.4EC** to the soil immediately after the last normal cultivation.

Apply **Sharda Metolachlor 86.4EC** alone, pre-plant incorporated, post-plant incorporated, pre-emergence, or lay-by at a broadcast rate of 1.0-1.33 pts./A in the Southeast and 0.85-1.33 pts./A in NM, OK, and TX.

Florida beggarweed in the Southeast (Partial control): Apply 1.33-2.0 pts./A pre-emergence.

Note: **Sharda Metolachlor 86.4EC** alone can be applied as directed after any of the following preplant incorporated herbicides when used according to label instructions:

Balan: 3-4 qts./A	Treflan EC: 1 pt./A	Vernam®: 2.33-3 pts./A
Sonalan: 1.25-3 pts./A	Pursuit: 0.25 pt./A	Prowl: 1-2 pts./A.

Restrictions:

- Do not graze or feed peanut forage or fodder to livestock for 30 days following application.
- Do not apply within 90 days of harvest.

Sharda Metolachlor 86.4EC COMBINATIONS

Tank Mixture with Balan L.C.

Sharda Metolachlor 86.4EC + Balan tank mixture applied pre-plant incorporated controls those weeds listed under **Sharda Metolachlor 86.4EC Applied Alone** and those weeds as listed on the Balan label.

Apply 1.0-1.33 pts./A of **Sharda Metolachlor 86.4EC** + 3-4 qts./A of Balan in a minimum of 10 gals. of spray volume per acre for ground application or in a minimum of 5.0 gals. of spray volume per acre for aerial application. Follow the procedures for Balan on the Balan label for soil preparation and incorporation of this tank mix. Apply and incorporate **Sharda Metolachlor 86.4EC** + Balan up to 14 days prior to planting.

Note: Follow all restrictions and precautions on the Balan label.

Multiple Applications

Where weed pressure is heavy or where species difficult to control are expected, **Sharda Metolachlor 86.4EC** is most effective when used as follows:

Southeast Only (AL, FL, GA, NC, SC, VA)

1st Application: Apply **Sharda Metolachlor 86.4EC** pre-plant incorporated as directed under **Peanuts-Sharda Metolachlor 86.4EC Alone** or apply **Sharda Metolachlor 86.4EC** + Balan pre-plant incorporated as directed previously in this section. Refer to the respective section for weeds controlled.

2nd Application: Apply 1.0-2.0 pts./A **Sharda Metolachlor 86.4EC** any time from pre-emergence up to "ground cracking" for extended control of weeds not yet emerged. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for a list of weeds controlled.

3rd Application: Apply **Sharda Metolachlor 86.4EC** at lay-by as directed under **Peanuts-Sharda Metolachlor 86.4EC Alone**. Use only when late germinating weeds are expected to be a problem. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for a list of weeds controlled.

Restrictions:

- Do not graze or feed peanut forage or fodder to livestock for 30 days following application.
- Do not apply within 90 days of harvest.
- Do not apply more than the equivalent of 2.66 pts. of **Sharda Metolachlor 86.4EC** per acre during any one year.

Southwest Only (NM, OK, TX)

1st Application: Apply **Sharda Metolachlor 86.4EC** pre-plant incorporated or pre-emergence or at-cracking as directed previously in this section. Refer to the respective section for weeds controlled.

2nd Application: Apply **Sharda Metolachlor 86.4EC** at lay-by as directed under **Peanuts-Sharda Metolachlor 86.4EC Alone** on this label. Use only when late germinating weeds are expected to be a problem. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for a list of weeds controlled.

Restrictions:

- Do not graze or feed peanut forage or fodder to livestock for 30 days following application.
- Do not apply within 90 days of harvest.
- Do not apply more than the equivalent of 2.67 pts. of **Sharda Metolachlor 86.4EC** per acre during any one year.
- Do not use **Sharda Metolachlor 86.4EC** after peanuts have emerged.

Tank Mixture or Sequentially with Pursuit

The tank mixture or sequential treatment of **Sharda Metolachlor 86.4EC** and Pursuit controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Pursuit alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Pursuit label for weeds controlled by Pursuit. Refer to the respective labels for application methods, timing, rates, restrictions, and precautions; and use in accordance with the more restrictive label. **Sharda Metolachlor 86.4EC** will not control emerged weeds.

Restriction:

- Do not exceed the maximum specified label rate of either product.

Tank Mixture with Sonalan

The tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Sonalan alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Sonalan label for weeds controlled by Sonalan. Apply **Sharda Metolachlor 86.4EC** + Sonalan pre-plant incorporated, using the appropriate rate from the **Sharda Metolachlor 86.4EC + Sonalan-Peanuts Sharda Metolachlor 86.4EC + Sonalan-Peanuts** table. Follow soil preparation procedures for Sonalan. Refer to the Peanut Sonalan/**Sharda Metolachlor 86.4EC** Tank Mixture label for incorporation specifications.

Sharda Metolachlor 86.4EC + Sonalan-Peanuts

USE AREAS	SOIL TEXTURE	BROADCAST RATES PER ACRE	
		Sharda Metolachlor 86.4EC	SONALAN
Southeast	Coarse	1.0 - 1.33 pts.	1.25 - 2.0 pts.
	Medium		1.75 - 2.50 pts.
	Fine		2.25 - 3.0 pts.

NM, OK, TX	Course Medium Fine	0.85 - 1.33 pts.	1.25 - 2.0 pts. 1.75 - 2.50 pts. 2.25 - 3.0 pts.
Follow all use directions, limitations, restrictions, precautions, and instructions regarding application to peanuts on the Sharda Metolachlor 86.4EC and Sonalan labels.			

Tank Mixture with Prowl

Sharda Metolachlor 86.4EC + Prowl applied pre-plant incorporated controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone plus Texas panicum, field sandbur, johnsongrass from seed, lambsquarters, kochia, annual spurge, and other species on the Prowl label. Apply **Sharda Metolachlor 86.4EC** + Prowl by ground or by aerial equipment within 14 days before planting. Incorporate into the top 1-2" of soil before planting and within 7 days of application, using a finishing disk or similar implement capable of providing uniform incorporation. If peanuts will be planted on beds, apply and incorporate after bed formation. Refer to the **Incorporation** instructions of the respective labels for additional directions.

Apply **Sharda Metolachlor 86.4EC** + Prowl pre-plant incorporated using the appropriate rates from the **Sharda Metolachlor 86.4EC + Prowl-Peanuts** table.

Sharda Metolachlor 86.4EC + Prowl-Peanuts

USE AREAS	SOIL TEXTURE	BROADCAST RATES PER ACRE
		Sharda Metolachlor 86.4EC + PROWL
NM, OK, TX	Sandy, loamy sand	0.85 + 1.0 - 1.5 pts.
	Sandy loam	0.85 - 1.0 + 1.0 - 1.5 pts.
	Fine	1.33 + 1.0 - 1.5 pts.
Other Peanut-Growing States	Sandy, loamy sand	1.0 - 1.33 + 1.5 - 2.0 pts.
	Sandy loam	1.0 - 1.33 + 1.5 - 2.0 pts.
	Fine	1.33 + 1.5 - 2.0 pts.
Follow all use directions, limitations, restrictions, precautions, and instructions regarding application to peanuts on the Sharda Metolachlor 86.4EC and Prowl labels.		

Tank Mixture or Sequentially with Starfire

Sharda Metolachlor 86.4EC + Starfire applied at ground cracking or sequentially will control or suppress small (1-6") emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **Sharda Metolachlor 86.4EC Applied Alone** section of this label. Apply 11 fl. oz./A of Starfire with the appropriate **Sharda Metolachlor 86.4EC** rate from the **Peanuts-Sharda Metolachlor 86.4EC Alone** section in a minimum spray volume of 20 gals./A with ground equipment. A second application of **Sharda Metolachlor 86.4EC** + Starfire may be made 28 days after ground cracking. (Refer to the **Peanuts-Sharda Metolachlor 86.4EC Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are indicated.) A second Starfire application may be made in all peanut growing areas if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

Tank Mixture or Sequentially with Starfire + Basagran

Adding Basagran to the **Sharda Metolachlor 86.4EC** + Starfire mixture improves control of prickly sida, cocklebur, smartweed, and bristly starbur. **Sharda Metolachlor 86.4EC** + Starfire + Basagran applied at ground cracking or sequentially will control or suppress small (1-6") emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **Sharda Metolachlor 86.4EC Applied Alone** section of this label. Apply 1 pt./A of Basagran + 11 fl. oz./A of Starfire with the appropriate **Sharda Metolachlor 86.4EC** rate from the **Peanuts-Sharda Metolachlor 86.4EC Alone** section in a minimum spray volume of 20 gals./A with ground equipment. A second application of **Sharda Metolachlor 86.4EC** + Starfire + Basagran may be made 28 days after ground cracking. (Refer to the **Peanuts-Sharda Metolachlor 86.4EC Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are indicated.) A second Starfire + Basagran application may be made in all peanut growing areas, if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

Tank Mixture or Sequentially with Starfire + Butyrac 200 or Butoxone 200

Adding Butyrac 200 or Butoxone 200 to the **Sharda Metolachlor 86.4EC** + Starfire mixture improves control of sicklepod, morningglory, and cocklebur. **Sharda Metolachlor 86.4EC** + Starfire + Butyrac 200 or Butoxone 200 applied at ground cracking or sequentially will control or suppress small (1-6") emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **Sharda Metolachlor 86.4EC Applied Alone** section of this label. Apply 11 fl. oz./A of Starfire + 8-16 fl. oz./A (0.125-0.25 lb./A) of Butyrac 200 or Butoxone 200 with the appropriate **Sharda Metolachlor 86.4EC** rate from the **Peanuts-Sharda Metolachlor 86.4EC Alone** section in a minimum spray volume of 20 gals./A with ground equipment. A second application of **Sharda Metolachlor 86.4EC** + Starfire + Butyrac 200 or Butoxone 200 may be made 28 days after ground cracking. (Refer to the **Peanuts-Sharda Metolachlor 86.4EC Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are indicated.) A second Starfire + Butyrac 200 or Butoxone 200 application may be made in all peanut growing areas if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

Tank Mixture or Sequentially with Basagran

Sharda Metolachlor 86.4EC + Basagran applied at ground cracking or sequentially will control species on the Basagran label and provide residual control of species listed in the **Sharda Metolachlor 86.4EC Applied Alone** section of this label. Apply 1-2 pts./A of Basagran in 20 gals./A, depending on weed species and stage of growth as specified on the Basagran label, with the appropriate **Sharda Metolachlor 86.4EC** rate from the **Peanuts-Sharda Metolachlor 86.4EC Alone** section. A second application of the combination may be made before peanut pegging. (Refer to the **Peanuts-Sharda Metolachlor 86.4EC Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are indicated.) A second Basagran application may be made in all peanut growing areas if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

Tank Mixture or Sequentially with Basagran + Butyrac 200 or Butoxone 200

Sharda Metolachlor 86.4EC + Basagran + Butyrac 200 or Butoxone 200 applied at ground cracking or sequentially will control species on the Basagran label and on the Butyrac or Butoxone labels, especially morningglories. Apply 1.5-2 pts./A of Basagran + 8 fl. oz./A of Butyrac 200 or Butoxone 200 in 20 gals./A, depending on weed species and stage of growth as specified on the Basagran label, with the appropriate **Sharda Metolachlor 86.4EC** rate from the **Peanuts-Sharda Metolachlor 86.4EC Alone** section. A second application of the combination may be made before peanut pegging. (Refer to the **Peanuts-Sharda Metolachlor 86.4EC Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are indicated.) A second Basagran + Butyrac 200 or Butoxone 200 application may be made in all peanut growing areas, if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

Tank Mixture or Sequentially with Storm®

Sharda Metolachlor 86.4EC + Storm applied at ground cracking through 2 expanded tetra foliate leaves or **Sharda Metolachlor 86.4EC** applied according to the directions for **Sharda Metolachlor 86.4EC Alone** and followed with an at-cracking through post-emergence treatment of Storm as specified on its label will control species on the Storm label and provide residual control of species listed in the **Sharda Metolachlor 86.4EC Applied Alone** section of this label. **Sharda Metolachlor 86.4EC** will not control emerged weeds. Refer to the **Peanuts-Sharda Metolachlor 86.4EC Alone** section and to the Storm label and follow all directions, limitations, and restrictions for each product.

POD CROPS

Pod crops, including garbanzo, great northern beans, kidney beans, lima beans, mung beans, navy beans, peas (English*; southern peas, such as blackeye, pinkeye, crowder, etc.), pinto beans, snap beans (green, wax, string), lentils, and lupines (sweet, white, white sweet, and grain).

Sharda Metolachlor 86.4EC ALONE

Apply **Sharda Metolachlor 86.4EC**, either pre-plant incorporated or pre-emergence, using the appropriate rate specified below.

Pre-Plant Incorporated or Pre-Emergence: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Coarse soils (<3% organic matter): Apply 1.0-1.33 pts./A.

Coarse soils (>3% organic matter): Apply 1.33 pts./A.

Medium soils: Apply 1.33-1.67 pts./A.

Fine soils (<3% organic matter): Apply 1.33 - 1.67 pts./A.

Fine soils (>3% organic matter): Apply 1.67-2 pts./A.

Restrictions:

- Do not use on English peas in northeastern U.S.; other areas only make pre-emergence applications.
- Do not cut for hay within 120 days following an **Sharda Metolachlor 86.4EC** application.
- Do not apply more than 3.0 pts./A of **Sharda Metolachlor 86.4EC** during any one crop year.

Sharda Metolachlor 86.4EC COMBINATIONS

Restriction:

When applying **Sharda Metolachlor 86.4EC** in combination on pod crops, do not cut for hay within 120 days following application.

Tank Mixture and Sequential Applications with Eptam-Beans (Green or Dry)

This mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Eptam alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section of this label for weeds controlled by **Sharda Metolachlor 86.4EC** alone and to the Eptam label for weeds controlled by Eptam.

Pre-Plant Incorporated: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Sequential: Apply Eptam alone pre-plant incorporated as specified on that label. Follow with a pre-emergence application of **Sharda Metolachlor 86.4EC** at rates specified for **Sharda Metolachlor 86.4EC** alone, during planting (behind the planter), or after planting but before the weeds or crop emerge.

Refer to the **Product Information** section of this label and to the Eptam label for weather, cultural practices, and all other restrictions, precautions and limitations that affect performance of these products.

Apply 2.5-4.5 pts./A of Eptam 7E with **Sharda Metolachlor 86.4EC** as specified. Refer to the Eptam label for rate limitations depending on geographical area and for species and varietal restrictions.

Coarse soils (<3% organic matter): Apply 0.85 pts./A.
Coarse soils (>3% organic matter): Apply 1.0 pts./A.
Medium soils (<3% organic matter): Apply 1.0 pts./A.
Medium soils (>3% organic matter): Apply 1.33 pts./A.
Fine soils (<3% organic matter): Apply 1.33 pts./A.
Fine soils (>3% organic matter): Apply 1.33 – 1.67 pts./A.

Restriction:

- Do not exceed 3.5 pts./A of Eptam 7E on small white beans or green beans grown on coarse textured soils.

Tank Mixture with Treflan-Beans (Dry-Kidney, Navy, Pinto, etc.; Lima; and Snap)

Sharda Metolachlor 86.4EC + Treflan tank mix applied pre-plant incorporated controls those weeds listed under **Sharda Metolachlor 86.4EC Applied Alone** and those weeds listed for Treflan alone on the Treflan label. **Sharda Metolachlor 86.4EC** + Treflan may be applied by ground or by aerial equipment and incorporated up to 14 days prior to planting. Follow the instructions on this label and on the respective Treflan label using equipment that provides uniform 2" incorporation.

Apply **Sharda Metolachlor 86.4EC** + Treflan tank mix using the appropriate **Sharda Metolachlor 86.4EC** rate specified for **Sharda Metolachlor 86.4EC** alone, and the Treflan rate from the Dry Beans, and the Lima and Snap Beans sections of the respective Treflan label. Choose the product rate for the specific soil texture/organic matter classification and weed species expected.

Note: Follow all restrictions and precautions on the respective Treflan label and in the **Pod Crops-Sharda Metolachlor 86.4EC Alone** section of this label.

POTATOES

Sharda Metolachlor 86.4EC ALONE

Apply **Sharda Metolachlor 86.4EC**, either incorporated, pre-emergence, or after hilling/lay-by, according to directions specified below for control of weeds listed under the **Product Information** section. Within a rate range, use the lower rate within the specified rate range on soils relatively coarse-textured or low in organic matter; use the higher rate within the specified rate range on soils relatively fine-textured or high in organic matter. Effectiveness will be reduced if later cultural practices expose untreated soil.

Incorporated: Apply **Sharda Metolachlor 86.4EC** at 1.0-2.0 pts./A to the soil and incorporate into the top 3" before planting using a finishing disk, harrow, rolling cultivator, or similar implement. Planting and later cultural practices must not bring untreated soil to the surface. Post-plant incorporated application may be made any time after planting to drag-off but before potato emergence. Use an implement that evenly distributes **Sharda Metolachlor 86.4EC** in the top 2" of soil. Do not damage potato seed pieces or sprouts with incorporation equipment.

Pre-Emergence: Apply **Sharda Metolachlor 86.4EC** at 1.0-2.0 pts./A, either after planting as a pre-emergence, delayed Pre-emergence, after drag-off or hilling treatment, but before weeds emerge. Up to 2.75 pts./A of **Sharda Metolachlor 86.4EC** alone may be used where soil organic matter is between 6% and 20%.

After Hilling/Lay-by: Apply 1.67 pts./A of **Sharda Metolachlor 86.4EC** after hilling/at lay-by to control **Sharda Metolachlor 86.4EC** sensitive species for remainder of the growing season. This application will not control emerged weeds. It may be applied over a previous **Sharda Metolachlor 86.4EC** application but do not apply more than 3.7 pts./A of **Sharda Metolachlor 86.4EC** in a single crop season.

Restrictions:

- Do not use on sweet potatoes or yams.
- Do not use on muck or peat soils. If cool, wet soil conditions occur after application, **Sharda Metolachlor 86.4EC** may delay maturity and/or reduce yield of Superior and other early maturing potato varieties.
- Do not apply both as a pre-emergence and an incorporated treatment.
- Potatoes treated with **Sharda Metolachlor 86.4EC** must not be harvested within 60 days after the at-planting to drag-off application or within 40 days after a lay-by application.
- Do not use in Kern County, CA.

Sharda Metolachlor 86.4EC COMBINATIONS

Tank Mixture with Sencor or Lexone

In addition to those weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC** applied in tank mix combination with, or sequentially with, any of the registered Sencor or Lexone formulations, also controls the following broadleaf weeds: hemp sesbania, lambsquarters, prickly sida, ragweed, smartweed, velvetleaf, Venice mallow and wild mustard.

Sharda Metolachlor 86.4EC applied in tank mix combination with, or sequentially with, any of the registered Sencor or Lexone formulations, partially controls cocklebur, hairy nightshade, jimsonweed.

Sharda Metolachlor 86.4EC at 1.0-2.0 pts./A plus the labeled Sencor/Lexone use rate may be used pre-emergence through after last hilling. Apply 1.0-1.33 pts./A of **Sharda Metolachlor 86.4EC** on coarse soils and 1.33-2.0 pts./A on other soil textures. Within this rate range, use the lower rate within the specified rate range on soils relatively coarse-textured or low in organic matter; use the higher rate within the specified rate range on soils relatively fine-textured or high in organic matter. Effectiveness will be reduced if later cultural practices expose untreated soil. **Sharda Metolachlor 86.4EC** will not control emerged weeds.

Refer to the Sencor or Lexone labels for precautionary statements, restrictions, application information, and weeds controlled.

Precautions:

- Make post-emergence applications to potatoes only as a directed or semi-directed spray to avoid chlorosis, minor necrosis, or leaf distortion.

Restrictions:

- Do not use **Sharda Metolachlor 86.4EC** + Sencor or Lexone on potatoes in Kern County, CA.
- Do not apply to sweet potatoes or yams.
- Do not harvest potatoes treated with **Sharda Metolachlor 86.4EC** in tank mixture with Sencor or Lexone within 60 days after application.
- Do not harvest potatoes within 40 days after a lay-by application of **Sharda Metolachlor 86.4EC**.
- Do not use this tank mixture on muck or peat soils.

Sharda Metolachlor 86.4EC + Lorox Tank Mixture (East of Rocky Mountains)

Apply **Sharda Metolachlor 86.4EC** in a tank-mix combination with any of the registered Lorox formulations as a pre-emergence broadcast application to potatoes. Apply to the soil surface after planting and before emergence of the crop or after final drag-off according to the rates specified in the **Sharda Metolachlor 86.4EC + Lorox-Potatoes (East of Rocky Mountains)** table.

Sharda Metolachlor 86.4EC + Lorox-Potatoes (East of Rocky Mountains)

SOIL TEXTURE	SOIL TEXTURE	BROADCAST RATES PER ACRE	
		Sharda Metolachlor 86.4EC	Lorox*
1-3% Organic Matter	Coarse (Sandy loam)	1.0 pts.	1.0 - 1.5 lbs.
	Medium (Loam, silt loam, silt)	1.33 pts.	1.5 - 2.0 lbs.
3-5% Organic Matter	Coarse (Sandy loam)	1.33 pts.	1.5 - 2.0 lbs.
	Medium (Loam, silt loam, silt)	1.5 - 2.0 pts.	2.0 - 2.5 lbs.

When using Lorox L or Lorox DF, use equivalent rates. 1 pt. of Lorox L equals 1 lb. of Lorox DF.

Restriction:

- Do not use on sands or loamy sands and do not incorporate or spray over the top of emerged potatoes.

Refer to the **Product Information** section of this label and to the Lorox label for precautionary statements, restrictions, application instructions, and weeds controlled.

Tank Mixture with Prowl 4E

In addition to the weeds controlled by **Sharda Metolachlor 86.4EC** alone, this tank mixture with Prowl 4E controls kochia, lambsquarters, purslane, annual spurge, stinging nettle, and others specified on the Prowl 4E Alone label. Apply **Sharda Metolachlor 86.4EC** + Prowl 4E pre-emergence, pre-emergence incorporated, or early post-emergence, according to the specific directions on the Prowl 4E label, using the rates in the **Sharda Metolachlor 86.4EC + Prowl 4E-Potatoes** table.

Sharda Metolachlor 86.4EC + Prowl 4E - Potatoes

SOIL TEXTURE	BROADCAST RATES PER ACRE	
	Sharda Metolachlor 86.4EC + PROWL 4E*	
<3% Organic Matter	Coarse	1.0 - 1.33 + 1.0 - 1.5 pts.
	Medium	1.33 pts. + 1.5 - 2.0 pts.
	Fine	1.33 - 1.67 pts. + 2.0 - 3.0 pts.
3-5% Organic Matter	Coarse	1.0 - 1.33 pts. + 1.0 - 1.5 pts.
	Medium	1.33 - 1.67 pts. + 2.0 - 3.0 pts.
	Fine	1.67 - 2.0 pts. + 3.0 pts.

*When using other formulations of Prowl, use equivalent rates of active ingredient.

Refer to the **Sharda Metolachlor 86.4EC** and Prowl 4E labels and observe all directions, timings, limitations, precautions, and restrictions concerning the use of these products on potatoes and follow the most restrictive.

Tank Mixture with Prowl 4E + Eptam

In addition to the weeds controlled by **Sharda Metolachlor 86.4EC** alone, this tank mixture will control those species on the Prowl 4E and Eptam labels. Refer to the **Sharda Metolachlor 86.4EC + Prowl 4E** labels for rates of those products and add Eptam 7E at 3.5-7.0 pts./A, depending on geographical area. Refer to the respective **Sharda Metolachlor 86.4EC**, Prowl 4E, and Eptam labels and observe all directions, limitations, precautions, and restrictions concerning the use of these products on potatoes and follow the most restrictive.

SAFFLOWER

Sharda Metolachlor 86.4EC ALONE

Pre-plant Incorporated or Pre-Emergence: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Coarse soils (<3% organic matter): Apply 1.0 - 1.33 pts./A.

Coarse soils (>3% organic matter): Apply 1.33 pts./A.

Medium soils: Apply 1.33 - 1.67 pts./A.

Fine soils (<3% organic matter): Apply 1.33 - 1.67 pts./A.

Fine soils (>3% organic matter): Apply 1.67 - 2.0 pts./A.

GRAIN OR FORAGE SORGHUM (SEED TREATED WITH CONCEP® OR SCREEN®)

Sharda Metolachlor 86.4EC ALONE

Apply **Sharda Metolachlor 86.4EC** either pre-plant surface, pre-plant incorporated, or pre-emergence, using the appropriate rate specified below. Apply **Sharda Metolachlor 86.4EC** alone only when the sorghum seed has been properly treated by the seed company with Concep or Screen.

Pre-Plant Surface-Applied: Refer to instructions for use of **Sharda Metolachlor 86.4EC** under **Application Instructions**. For minimum-tillage or no-tillage systems only, **Sharda Metolachlor 86.4EC** may be applied up to 45 days before planting in CO, IA, IL, KS, MO, NE, and SD. Use only split applications for treatments made 30-45 days prior to planting with $\frac{3}{4}$ of the broadcast rate applied initially and the remaining $\frac{1}{4}$ at planting. Apply 1.50 pts./A of **Sharda Metolachlor 86.4EC** on medium soils or 1.67 pts./A on fine soils. Treatments less than 30 days prior to planting may be made either as a split or single application. Apply 1.33 pts./A of **Sharda Metolachlor 86.4EC** on coarse soils not more than 2 weeks prior to planting. Under dry conditions, irrigate after application to move **Sharda Metolachlor 86.4EC** into the soil.

Pre-plant Incorporated or Pre-emergence: Refer to instructions for use of **Sharda Metolachlor 86.4EC** under **Application Instructions**. Make broadcast as follows:

Coarse soils: 1.0 - 1.33 pts./A

Medium soils: 1.33 - 1.50 pts./A

Fine soils: 1.33 - 1.67 pts./A

Precautions:

- If sorghum seed is not properly treated with Concep or Screen, **Sharda Metolachlor 86.4EC** will severely injure the crop.
- Under high soil moisture conditions prior to sorghum emergence, injury may occur following the use of **Sharda Metolachlor 86.4EC**. The crop will normally outgrow this effect.

Restrictions:

- Do not use **Sharda Metolachlor 86.4EC** on sorghum grown under dry mulch tillage.
- Except for the split pre-plant surface treatment, do not make more than one application per year.

Sharda Metolachlor 86.4EC COMBINATIONS

Sharda Metolachlor 86.4EC tank mixtures with AAtrex may be applied in water or fluid fertilizer. Apply **Sharda Metolachlor 86.4EC** in tank mixtures only when the sorghum seed has been properly treated by the seed company with Concep or Screen.

IMPORTANT: FOR TANK MIXTURES WITH AATREX (OR OTHER BRANDS OF ATRAZINE)

If applying **Sharda Metolachlor 86.4EC** in tank mixture with AAtrex, all the restrictions and rate limitations on the AAtrex label must be followed if the label directions are more restrictive/protective than those on this label. In addition, if AAtrex is/must be applied at rates lower than those listed on this label, broadleaf weed control may be affected. Refer to the AAtrex label for weeds controlled at the reduced rates.

Precautions:

Applications of **Sharda Metolachlor 86.4EC** + AAtrex on highly alkaline soils or on eroded areas where calcareous subsoils are exposed may cause sorghum injury.

If sorghum seed is not properly treated with Concep or Screen, **Sharda Metolachlor 86.4EC** + AAtrex may severely injure the crop. Under high soil moisture conditions prior to sorghum emergence, injury may occur following the use of **Sharda Metolachlor 86.4EC** + AAtrex. The crop will normally outgrow this effect.

Restrictions:

- Do not use **Sharda Metolachlor 86.4EC** + AAtrex on sorghum grown under dry mulch tillage.
- Do not make more than one application per year Except for the split pre-plant surface treatment.

Tank Mixture with AAtrex

In addition to the weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC** + AAtrex also controls the following broadleaf weeds when applied either pre-plant surface, pre-plant incorporated, or pre-emergence:

Cocklebur	Hairy Nightshade	Morningglory	Smartweed
Common Purslane	Lambsquarters	Ragweed	Velvetleaf

Pre-Plant Surface-Applied: Refer to instructions for use of **Sharda Metolachlor 86.4EC** under **Application Instructions**. For minimum-tillage or no-tillage systems only, **Sharda Metolachlor 86.4EC** + AAtrex may be applied up to 45 days prior to planting in IA, IL, eastern KS, MO, NE, and SD. Use only split applications for treatments made 30-45 days prior to planting with 2/3 of the broadcast rate applied initially and the remaining 1/3 at planting. Apply as follows:

Medium soils with >1.5% organic matter: 1.50 pts./A of **Sharda Metolachlor 86.4EC** + 1.7 - 2 lbs./A of AAtrex Nine-O*

Fine soils with <1.5% organic matter: 1.50 pts./A of **Sharda Metolachlor 86.4EC** + 1.7 - 2 lbs./A of AAtrex Nine-O

Fine soils with >1.5% organic matter: 1.67 pts./A of **Sharda Metolachlor 86.4EC** + 2 - 2.2 lbs./A of AAtrex Nine-O

*When using AAtrex 4L, use equivalent rates. One lb. of AAtrex Nine-O equals 1.8 pts. of AAtrex 4L.

Treatments less than 30 days prior to planting may be made either as a split or single application. Under dry conditions, irrigate after application to move **Sharda Metolachlor 86.4EC** + AAtrex into the soil.

Restrictions:

- Do not use on coarse soils.
- Do not use on medium soils with <1.5% organic matter.

Pre-Plant Incorporated or Pre-Emergence: Refer to instructions for use of **Sharda Metolachlor 86.4EC** under **Application Instructions**. Apply as follows:

Medium soils with >1.5% organic matter: 1.0 pts./A of **Sharda Metolachlor 86.4EC** + 1.3 lbs./A of AAtrex Nine-O*

Fine soils with <1.5% organic matter: 1.0 pts./A of **Sharda Metolachlor 86.4EC** + 1.3 lbs./A of AAtrex Nine-O

Fine soils with >1.5 organic matter: 1.2 - 1.33 pts./A of **Sharda Metolachlor 86.4EC** + 1.6 - 1.8 lbs./A of AAtrex Nine-O

*When using AAtrex 4L, use equivalent rates. One lb. of AAtrex Nine-O equals 1.8 pts. of AAtrex 4L.

Restrictions:

- Do not use on coarse soils.
- Do not use on medium soils with <1.5% organic matter.
- Do not use in NM, OK, or TX, except in northeast OK and the TX Gulf Coast and Blacklands areas.
- Do not apply pre-plant incorporated in AZ or the Imperial Valley of CA.

Tank Mixture of Sharda Metolachlor 86.4EC or Sharda Metolachlor 86.4EC + AAtrex, with Gramoxone Extra, Landmaster BW, or Roundup for Minimum-Tillage or No-Tillage Systems

In minimum-tillage or no-tillage systems where sorghum (seed treated with Concep or Screen) is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Extra, Landmaster BW, or Roundup may be tank mixed with **Sharda Metolachlor 86.4EC** or **Sharda Metolachlor 86.4EC** + AAtrex. In Minimum-Tillage and No-Tillage systems, mix with Gramoxone Extra for control of most emerged annual weeds and suppression of perennial weeds; or with Landmaster BW for suppression of emerged field bindweed and control or suppression of annual weeds; or with Roundup for control of most emerged annual and perennial weeds. Refer to the label of each product used in combination and observe the planting details, restrictions, and all other precautions and limitations.

The **Sharda Metolachlor 86.4EC** or **Sharda Metolachlor 86.4EC** + AAtrex portion of the tank mixture provides pre-emergence control of the weeds listed on this label under the respective sections.

Application Instructions: Apply before, during, or after planting, but before sorghum emerges, at the appropriate rates listed under **Grain or Forage Sorghum-Sharda Metolachlor 86.4EC Alone or -Sharda Metolachlor 86.4EC Combinations- Sharda Metolachlor 86.4EC + AAtrex**, respectively. Add Gramoxone Extra, Landmaster BW, or Roundup at the following broadcast rates:

Gramoxone Extra:

Weeds 1-3": 1.5-2 pts./A

Weeds 3-6": 2-2.5 pts./A

Weeds 6": 2.5-3 pts./A

Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50-74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6".

Landmaster BW: 27-54 oz./A depending on weed species and size. See the Landmaster BW label for weeds controlled, rates for specific weeds, and other information concerning use.

Roundup: See the Roundup or Roundup RT label for weeds controlled, rates, and other use directions. Apply in a minimum of 20 gals. of water per acre with conventional spray equipment.

SOYBEANS

Sharda Metolachlor 86.4EC ALONE

Apply **Sharda Metolachlor 86.4EC**, either pre-plant surface-applied, pre-plant incorporated, pre-emergence, or post-emergence using the appropriate rate specified below.

Pre-Plant Surface-Applied, Pre-Plant Incorporated, Pre-Emergence: Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Instructions**.

Post-Emergence: Follow the **Tank Mixture** instructions under **Post-Emergence Applications**.

Pre-Plant Surface-Applied

Fall Application (Apply after September 30 in MN, ND, SD, WI and North of Route 30 in IA; Apply after October 15 north of Route 91 in NE and South of Route 30 in IA; Apply after October 31 north of Route 136 in IL): In all locations, apply to crop stubble after harvest when the sustained soil temperature at a 4" depth is less than 55°F and falling. In minimum-till or no-tillage systems on soils having greater than 2.5% organic matter, use 1.67-2.0 pts./A on medium-textured and 2.0 pts./A on fine-textured soils. A tillage operation may precede the application. Minimize furrow and ridge formation in the tillage operations.

Restrictions:

- If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate for soybeans.
- A fall and/or a spring tillage may follow application, but do not exceed an incorporation depth greater than 2-3".
- Do not apply to frozen ground.

Use on medium and fine soils with minimum-tillage or no-tillage systems in CO, CT, DE, IA, IL, IN, KS, KY, MA, MD, ME, MI, MN, MO, MT, ND, NE, NH, NY, OH, PA, RI, SD, TN, VA, VT, WI, WV, and WY. Apply 2/3 the labeled rate of **Sharda Metolachlor 86.4EC** (1.67 pts./A on medium soils and 2.0 pts./A on fine soils) as a split treatment 30-45 days prior to planting and the remainder at planting. Applications made less than 30 days before planting may be as either a split or single treatment. Apply 1.33 pts./A on coarse soils not more than 2 weeks prior to planting.

Pre-Plant Incorporated or Pre-Emergence: Apply **Sharda Metolachlor 86.4EC** as follows:

Coarse soils with <3% organic matter: 1.0 - 1.33 pts./A

Coarse soils with >3% organic matter: 1.33 pts./A

Medium soils: 1.33 - 1.67 pts./A

Fine soils with <3% organic matter: 1.33 - 1.67 pts./A

Fine soils with >3% organic matter: 1.67 - 2.0 pts./A

Restrictions:

- The total **Sharda Metolachlor 86.4EC** rate applied to soybeans during any one crop must not exceed 2.75 pts./A.
- Do not graze or feed treated soybean forage, hay, or straw to livestock 30 days following treatment.

Note: On soybeans, **Sharda Metolachlor 86.4EC** may be used up to 2.75 pts./A as a pre-plant surface-applied, pre-plant incorporated, or pre-emergence treatment on soils having an organic matter content between 6-20%.

Post-Emergence:

From emergence up through the third trifoliate leaf stage:

Apply 1.0-1.33 pts./A as a post-emergence treatment to soybeans from emergence up through the **third trifoliate leaf stage**. **Sharda Metolachlor 86.4EC** will not control emerged weeds so it must be applied to a weed-free surface or in a tank mixture with products that provide post-emergence control of weeds present at the time of application.

From emergence up through the fifth trifoliate leaf stage:

Apply 1.0-1.33 pts./A as a post-emergence treatment to soybeans from emergence up through the **fifth trifoliate leaf stage**. **Sharda Metolachlor 86.4EC** will not control emerged weeds so it must be applied to a weed-free surface or in a tank mixture with products that provide post-emergence control of weeds present at the time of application.

Note: Make post-emergence applications at least 90 days before harvest.

Restrictions:

- Do not apply more than 1.33 pts./A post-emergence.
- Do not graze or feed treated forage or hay from soybeans to livestock following a post-emergence application.
- Do not make a post-emergence application of **Sharda Metolachlor 86.4EC** if a pre-plant surface, pre-plant incorporated, or
- Pre-emergence application of metolachlor products have already been applied.

Sharda Metolachlor 86.4EC COMBINATIONS

Water or fluid fertilizer may be used as carrier for **Sharda Metolachlor 86.4EC** in combination with Sencor, Lexone, Lorox, Lorox Plus, Gemini, Canopy, Preview, Pursuit, Scepter, Sonalan, or Command.

Note: For all of the following combinations, **Sharda Metolachlor 86.4EC** may be used up to 2.5 pts./A on soils having an organic matter content between 6-20%.

Restriction:

- Do not apply more than 2.75 pts./A of **Sharda Metolachlor 86.4EC** during any one crop year.

Pre-Plant/Pre-Emergence Applications

Tank Mixture with Sencor or Lexone

In addition to those weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC** + Sencor or Lexone, when applied as directed, controls the following broadleaf weeds:

Hairy Nightshade	Prickly Sida	Velvetleaf
Hemp Sesbania	Ragweed	Venice Mallow
Lambsquarters	Smartweed	Wild Mustard

Sharda Metolachlor 86.4EC + Sencor or Lexone, when applied as directed, partially controls cocklebur and jimsonweed.

Apply **Sharda Metolachlor 86.4EC** and Sencor or Lexone pre-plant incorporated or pre-emergence using the appropriate rates from the **Sharda Metolachlor 86.4EC + Sencor or Lexone-Soybeans** table.

Pre-Plant Incorporated or Pre-Emergence:

Follow instructions for use of **Sharda Metolachlor 86.4EC** alone under **Application Procedures**.

Sequential: Apply **Sharda Metolachlor 86.4EC** alone **Pre-plant Incorporated**, as specified in the **Sharda Metolachlor 86.4EC + Sencor or Lexone-Soybeans** table for this tank mixture. Follow with a pre-emergence application of Sencor or Lexone during planting (behind the planter) or after planting but before weeds or soybeans emerge. Refer to the Sencor or Lexone labels for planting details and soybean variety restrictions.

Sharda Metolachlor 86.4EC + Sencor or Lexone-Soybeans

Do not use on muck or peat with >20% organic matter.

SOIL TEXTURE**	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Sencor/Lexone DF*
0.5 - <3% Organic Matter	
Coarse: Loamy sand (>2% organic matter), sandy loam	0.85 - 1.0 pt. + 0.33 lb.
Medium	1.0 - 1.33 pts. + 0.5 lb.
Fine	1.33 pts. + 0.67 lb.
Mississippi Delta only (Silty clay, clay)	1.33 pts. + 1.0 lb.
>3% Organic Matter	
Coarse: Loamy sand (>2% organic matter), sandy loam	1.0 pt. + 0.5 lb.
Medium	1.33 pts. + 0.67 lb.***
Fine	1.33 - 1.67 pts. + 0.67 lb.
Mississippi Delta only (Silty clay, clay)	1.33 - 1.67 pts. + 1.0 lb.
*When using Sencor 4 or Lexone 4L, multiply lbs. of DF by 1.5 to get pts./A.	
** On all sand and on loamy sand with <2% organic matter, do not use this tank mixture pre-emergence or the sequential treatment. Do not use the tank mixture pre-plant incorporated on any sand, loamy sand, or sandy loam.	
***Use 0.5 lb./A if applied pre-plant incorporated.	

Precaution:

- Heavy rains soon after application can cause crop injury, especially in poorly drained areas where water stands for several days.

Restriction:

- Do not use the tank mix or sequential application on soil with <0.5% organic matter or on alkaline soil with a pH >7.4.

Tank Mixture with Lorox

In addition to those weeds controlled by **Sharda Metolachlor 86.4EC** alone, **Sharda Metolachlor 86.4EC** + Lorox, applied pre-emergence, controls lambsquarters, prickly sida, ragweed, smartweed, Venice mallow, and wild mustard.

Sharda Metolachlor 86.4EC + Lorox, when applied as directed, partially controls cocklebur, jimsonweed, morningglory, and velvetleaf.

Pre-Emergence: Apply during planting (behind planter) or after planting, but before weeds or soybeans emerge. Refer to the Lorox label for planting details. Apply the appropriate rates from the **Sharda Metolachlor 86.4EC + Lorox-Soybeans** table.

Precaution: To avoid crop injury, do not use on soil with less than 0.5% organic matter.

Sharda Metolachlor 86.4EC + Lorox-Soybeans

Do not use on muck or peat with >20% organic matter.

SOIL TEXTURE*, **	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Lorox DF***
0.5 - <3% Organic Matter Coarse Medium Fine	0.85 pt. + 1 lb.
	1.0 pt. + 1 - 1.5 lbs.
	1.33 pts. + 2 lbs.
>3% Organic Matter Coarse Medium Fine	1.0 pt. + 1 - 1.5 lbs.
	1.33 pts. + 1.5 - 2 lbs.
	1.33 - 1.67 pts. + 2.5 - 3 lbs.
*Do not use on sand, gravelly soils, or exposed subsoils.	
**Do not use on loamy sand except in the northeastern U.S. on loamy sand with >1% organic matter.	
***When using Lorox L or Lorox DF, use equivalent rates. One pt. of Lorox L equals 1 lb. of Lorox DF.	

Tank Mixture with Treflan

Sharda Metolachlor 86.4EC + Treflan tank mix applied pre-plant incorporated controls those weeds listed under the **Sharda Metolachlor 86.4EC Applied Alone** section and those weeds listed for Treflan Alone on the Treflan label. **Sharda Metolachlor 86.4EC** + Treflan may be applied by ground or by aerial equipment and incorporated up to 14 days before planting. Follow the procedures on the Treflan and **Sharda Metolachlor 86.4EC** labels using equipment that provides uniform 2-inch incorporation.

Apply **Sharda Metolachlor 86.4EC** + Treflan tank mix, using the appropriate rate from the **Soybeans-Sharda Metolachlor 86.4EC Alone** section of this label and the Treflan Alone section of the Treflan label for the specific soil texture/organic matter classification and weed species expected.

To control DNA-resistant goosegrass* and other species on the respective labels where the soil organic matter is 3% or less, apply the rate listed in the **Sharda Metolachlor 86.4EC + Treflan-Organic Matter Content Less Than 3%** table.

Sharda Metolachlor 86.4EC + Treflan-Organic Matter Content Less Than 3%

Follow all restrictions and precautions on the respective Treflan label and in the **Soybeans- Sharda Metolachlor 86.4EC Alone** section of this label.

SOIL TEXTURE	BROADCAST RATES PER ACRE*
	Sharda Metolachlor 86.4EC + Treflan EC**
<3% Organic Matter Coarse Medium Fine	0.85 - 1.0 pt.
	1.0 pt.
	1.33 pts.
<2% Organic Matter Coarse Medium Fine	1 pt.
	1.5 pts.
	2 pts.
2-3% Organic Matter Coarse Medium Fine	1.5 pts.
	1.5 pts.
	2.0 pts.

*Where a range of rates is given for **Sharda Metolachlor 86.4EC**, use the minimum rate within the specified rate range where DNA-resistant goosegrass is the predominant species.
**When Treflan MTF or Treflan 5 is used, use comparable rates. Multiply pts. of Treflan E.C. by 1 for Treflan MTF and by 0.8 for Treflan 5.

Tank Mixture with Scepter

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Scepter alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Scepter label for weeds controlled by Scepter. Refer to the Scepter label for geographical locations where this tank mixture may be applied.

Apply **Sharda Metolachlor 86.4EC** + Scepter pre-plant incorporated or pre-emergence using rates in the **Sharda Metolachlor 86.4EC + Scepter-Soybeans** table. Follow use directions under **Application Instructions** on the Scepter label. For Pre-Plant Incorporated Applications, apply and incorporate within 30 days before planting. Observe all other restrictions, precautions and limitations on the Scepter labels.

Sharda Metolachlor 86.4EC + Scepter-Soybeans

Do not use on muck or peat with >20% organic matter.

SOIL TEXTURE	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Scepter
<3% Organic Matter	
	Coarse 0.85 pt. + 0.67 pt.
	Medium 1.0 + 0.67 pt.
	Fine 1.33 pts. + 0.67 pt.
>3% Organic Matter	
	Coarse 1.0 pt. + 0.67 pt.
	Medium 1.33 pts. + 0.67 pt.
	Fine 1.33 - 1.67 pts.* + 0.67 lb.

*Use the higher rate within the specified rate range of **Sharda Metolachlor 86.4EC** if heavy weed infestations are expected.

Restrictions:

- Do not apply within 90 days of harvest.
- Do not graze or feed treated soybean forage, hay, or straw to livestock.

Tank Mixture with Lorox Plus

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Lorox Plus alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Lorox Plus label for weeds controlled by Lorox Plus.

Apply **Sharda Metolachlor 86.4EC** + Lorox Plus pre-emergence after planting, but before soybeans emerge, using rates in the **Sharda Metolachlor 86.4EC+ Lorox Plus-Soybeans** table. Follow all use directions, limitations, restrictions, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and Lorox Plus labels.

Sharda Metolachlor 86.4EC+ Lorox Plus-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Lorox Plus (60 DF)
0.5% -3% Organic Matter	
	Coarse 0.85 pt. + 12 - 14 oz.
	Medium 1.0 pt. + 14 - 16 oz.
	Fine 1.33 pts. + 16 - 18 oz.

Restriction:

- Do not apply to sand, or to any soil <0.5% organic matter, or to any soil with pH >6.8.

Tank Mixture with Gemini

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Gemini alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Gemini label for weeds controlled by Gemini. Apply **Sharda Metolachlor 86.4EC** + Gemini pre-emergence after planting, but before soybeans emerge, using rates in the **Sharda Metolachlor 86.4EC + Gemini-Soybeans** table.

Note: Follow all use directions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and Gemini labels.

Sharda Metolachlor 86.4EC + Gemini-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Gemini (60 DF)
0.5% -3% Organic Matter	
Coarse (Sandy loam only)	0.85 pt. + 12 - 16 oz.
Medium	1.0 pt. + 16 - 20 oz.
Fine	1.33 pts. + 20 - 24 oz.

Restriction:

- Do not apply to sand or loamy sand, or to any soil <0.5% organic matter, or to any soil with pH >7.0, except as in the directions for use on the Gemini label.

Tank Mixture with Canopy

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Canopy alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Canopy label for weeds controlled by Canopy. Apply pre-plant incorporated or pre-emergence using the appropriate rates from the **Sharda Metolachlor 86.4EC + Canopy-Soybeans** table.

Pre-Plant Incorporated: Apply within 2 weeks of planting. Uniformly incorporate into the top 1-2 inches of soil before planting soybeans.

Pre-Emergence: Apply after planting, but before soybeans emerge.

Follow all use directions, varietal restrictions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and Canopy labels.

Sharda Metolachlor 86.4EC + Canopy-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Canopy
<3% Organic Matter	
Coarse	0.85 pt. + *
Medium	1.0 pt. + *
Fine	1.33 pts. + *
>3% Organic Matter	
Coarse	1.0 pt. + *
Medium	1.33 pts. + *
Fine	1.33 - 1.67 pts. + *

*Refer to the Canopy label for appropriate rate according to geographical location, soil and organic matter classification, and pH limitations.

Restriction:

- Do not apply to sand, or to any soil <0.5% organic matter, or to any soil with pH >7.0, except as in the directions for use on the Canopy label.

Tank Mixture with Preview

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Preview alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Preview label for weeds controlled by Preview. Apply pre-plant incorporated or pre-emergence, using the appropriate rates from the **Sharda Metolachlor 86.4EC + Canopy-Soybeans** table.

Pre-Plant Incorporated: Apply within 2 weeks of planting. Uniformly incorporate into the top 1-2 inches of soil before planting soybeans.

Pre-Emergence: Apply after planting, but before soybeans emerge.

Note: Follow all use directions, varietal restrictions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and Preview labels.

Sharda Metolachlor 86.4EC + Preview-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Preview 75 DF
0.5 - 3% Organic Matter	
Coarse	0.85 pt. + 6 oz.
Medium	1.0 pt. + 7 oz.
Fine	1.33 pts. + 8 oz.
3-5% Organic Matter	

Coarse	1.0 pt. + 7 oz.
Medium	1.33 pts. + 8 oz.
Fine	1.33 - 1.67 pts. + 9 - 10 oz.

Restriction:

- Do not apply to sand, or to any soil <0.5% organic matter, or to any soil with pH >6.8.

Tank Mixture with Command

Before making applications, read and strictly follow all use directions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and Command labels.

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Command alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Command label for weeds controlled by Command. Apply **Sharda Metolachlor 86.4EC** + Command pre-plant incorporated, using rates in the **Sharda Metolachlor 86.4EC + Command-Soybeans** table. Follow all Command application instructions as to incorporation interval, geographical location, equipment operation, soil moisture conditions, etc.

Sharda Metolachlor 86.4EC + Command-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE		
	Sharda Metolachlor 86.4EC +	Command 4E	
		Northern Region	Southern Region
0.5 - 3% Organic Matter Coarse Medium Fine	0.85 pt. 1.0 pt. 1.33 pts.	1.5 - 2 pts.	2 - 2.5 pts.
>3% Organic Matter Coarse Medium Fine	1.0 pt. 1.33 pts. 1.33 - 1.67 pts.		

Tank Mixture with Sonalan

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Sonalan alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Sonalan label for weeds controlled by Sonalan. Apply **Sharda Metolachlor 86.4EC** and Sonalan pre-plant incorporated using the appropriate rates from the **Sharda Metolachlor 86.4EC + Sonalan-Soybeans** table.

Pre-Plant Incorporated: Follow soil preparation procedures for Sonalan. Refer to the Sonalan/ **Sharda Metolachlor 86.4EC** Tank Mixture label for incorporation specifications.

Sequential: Apply Sonalan alone pre-plant incorporated as specified on the Sonalan label. Follow with a pre-emergence application of **Sharda Metolachlor 86.4EC** during planting (behind the planter) or after planting but before weeds or soybeans emerge.

Sharda Metolachlor 86.4EC + Sonalan - Soybeans

Do not use on muck or peat with >20% organic matter.

SOIL TEXTURE	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Sonalan
<3% Organic Matter Coarse Medium* Fine	1.0 - 1.33 pts. + 1.25 - 2.0 pts. 1.33 - 1.67 pts. + 1.75 - 2.50 pts. 1.33 - 1.67 pts. + 2.25 - 3.0 pts.
>3% Organic Matter Coarse Medium* Fine	1.33 pts. + 1.25 - 2.0 pts. 1.33 - 1.67 pts. + 1.75 - 2.50 pts. 1.67 - 2.0 pts. + 2.25 - 3.0 pts.

*For eastern black nightshade on these soils, apply Sonalan at 3 pts./A on medium- and 3.5 pts./A on fine textured soils, and follow with 2 incorporation passes.

Follow all use directions, limitations, restrictions, precautions, and information regarding application to soybeans on the **Sharda Metolachlor 86.4EC** and Sonalan labels.

Tank Mixture with Pursuit

This tank mixture controls all weeds controlled by **Sharda Metolachlor 86.4EC** alone and by Pursuit alone. Refer to the **Sharda Metolachlor 86.4EC Applied Alone** section for weeds controlled by **Sharda Metolachlor 86.4EC** and to the Pursuit label for weeds controlled by Pursuit. Refer to the Pursuit label for geographical locations where this tank mixture may be applied.

Apply **Sharda Metolachlor 86.4EC + Pursuit** early pre-plant, pre-plant incorporated, or pre-emergence after planting using rates in the **Sharda Metolachlor 86.4EC + Pursuit-Soybeans** table. Application can be made in water or liquid fertilizer. Follow all use directions under Soil Applications on the Pursuit label. For early pre-plant and pre-plant incorporated applications, apply within 30 days before planting.

Note: Follow all use directions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Sharda Metolachlor 86.4EC** and Pursuit labels.

Sharda Metolachlor 86.4EC + Pursuit-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE
	Sharda Metolachlor 86.4EC + Pursuit
<3% Organic Matter	
	Coarse 0.85 pt. + 0.25 pt.
	Medium 1.0 pt. + 0.25 pt.
	Fine 1.33 pts. + 0.25 pt.
>3% Organic Matter	
	Coarse 1.0 pts. + 0.25 pt.
	Medium 1.33 pts. + 0.25 pt.
	Fine 1.33 - 1.67 pts. + 0.25 pt.

Sequential: Apply **Sharda Metolachlor 86.4EC** early pre-plant, pre-plant incorporated, or pre-emergence after planting at 0.85 pt./A on coarse soils and 1.0 pt./A on medium- and fine-textured soils. Follow with a sequential post-emergence application of Pursuit to control emerged weeds according to the Pursuit label. **Sharda Metolachlor 86.4EC** will improve the consistency and level of control from Pursuit on most grass species. Refer to the Pursuit post-emergence label for a listing of weeds controlled, application rate, and growth stage limitations.

Tank Mixture with Lexone, Sencor, Scepter, Lorox, Lorox Plus, Gemini, Canopy, Preview, or Pursuit, plus Gramoxone Extra or Roundup for Minimum-Tillage or No-Tillage Systems

In minimum-tillage or no-tillage systems where soybeans are planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Extra or Roundup may be added to a tank mix of either **Sharda Metolachlor 86.4EC + Sencor** or **Lexone**, **Sharda Metolachlor 86.4EC + Scepter**, **Sharda Metolachlor 86.4EC + Lorox**, **Sharda Metolachlor 86.4EC + Lorox Plus**, **Sharda Metolachlor 86.4EC + Gemini**, **Sharda Metolachlor 86.4EC + Canopy**, **Sharda Metolachlor 86.4EC + Preview**, or **Sharda Metolachlor 86.4EC + Pursuit**. When used as directed, the Gramoxone Extra portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds. Roundup combinations will control emerged annual and perennial weeds when applied as directed on the Roundup label. The **Sharda Metolachlor 86.4EC + Sencor / Lexone**, **Scepter**, **Lorox**, **Lorox Plus**, **Gemini**, **Canopy**, **Preview**, or **Pursuit** portion of the tank mixture provides pre-emergence control of the weeds listed on this label in the tank mixture section for **Sharda Metolachlor 86.4EC + Sencor / Lexone**, **Sharda Metolachlor 86.4EC + Scepter**, **Sharda Metolachlor 86.4EC + Lorox**, **Sharda Metolachlor 86.4EC + Lorox Plus**, **Sharda Metolachlor 86.4EC + Gemini**, **Sharda Metolachlor 86.4EC + Canopy**, **Sharda Metolachlor 86.4EC + Preview**, and **Sharda Metolachlor 86.4EC + Pursuit**, respectively.

Refer to the label of each product used in combination and observe the planting details, soybean variety restrictions, information regarding application to soybeans, geographical restrictions, and all other precautions and limitations. Refer below for rates of Gramoxone Extra or Roundup, **Sharda Metolachlor 86.4EC + Sencor / Lexone**, **Sharda Metolachlor 86.4EC + Scepter**, **Sharda Metolachlor 86.4EC + Lorox**, **Sharda Metolachlor 86.4EC + Lorox Plus**, **Sharda Metolachlor 86.4EC + Gemini**, **Sharda Metolachlor 86.4EC + Canopy**, **Sharda Metolachlor 86.4EC + Preview**, and **Sharda Metolachlor 86.4EC + Pursuit**, respectively.

Application: Apply before, during, or after planting, but before the soybeans emerge, at the rates specified below. Add Gramoxone Extra or Roundup at the following broadcast rates:

Gramoxone Extra:

Weeds 1-3": 1.5-2 pts./A

Weeds 3-6": 2-2.5 pts./A

Weeds 6": 2.5-3 pts./A

Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50-74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6".

Restriction: Do not apply combinations containing Gramoxone Extra in suspension type liquid fertilizers as the activity of paraquat will be reduced.

Roundup: See the Roundup or Roundup RT label for weeds controlled, rates, and other use directions. Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.

Sharda Metolachlor 86.4EC + Lexone / Sencor + Gramoxone Extra or Roundup

Loamy sand >2% organic matter: Apply 1.0 pt. / A of **Sharda Metolachlor 86.4EC** + 0.33 - 0.5 lb./A of Sencor or Lexone DF.

Medium soils: Apply 1.33 pts./A of **Sharda Metolachlor 86.4EC** + 0.5-0.67 lb./A of Sencor or Lexone DF.

Fine soils: Apply 1.33 - 1.67 pts./A of **Sharda Metolachlor 86.4EC** + 0.67 lb./A of Sencor or Lexone DF.

When using Sencor 4 or Lexone 4L, multiply lbs. of DF by 1.5 to get pts./A.

If heavy rain occurs soon after application, crop injury may result, especially in poorly drained areas where water stands for several days or where the seeding slit has not been properly closed.

Restriction:

- Do not use this tank mixture on soil with <0.5% organic matter, on alkaline soil with a pH >7.4, or on all sand and loamy sand with <2% organic matter.

Sharda Metolachlor 86.4EC + Scepter + Gramoxone Extra or Roundup

Coarse soils: Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 0.67 pt./A of Scepter.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 0.67 pt./A of Scepter.

Fine soils: Apply 1.67 pts. /A of Sharda Metolachlor 86.4EC + 0.67 pt./A of Scepter.

Restrictions:

- Do not apply within 90 days of harvest.
- Do not graze or feed treated soybean forage, hay, or straw to livestock.

Sharda Metolachlor 86.4EC + Lorox + Gramoxone Extra or Roundup

Coarse soils*: Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 1-1.5 lbs./A of Lorox DF**.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 1-2 lbs./A of Lorox DF.

Fine soils: Apply 1.33-1.67 pts./A of Sharda Metolachlor 86.4EC + 2-3 lbs./A of Lorox DF.

Restrictions:

- Do not use on soil with <0.5% organic matter.
- Do not use on loamy sand except in the northeastern U.S.
- Do not use loamy sand with >1% organic matter.
- Do not use on sand, gravelly soils, or exposed subsoils.

** When using Lorox L or Lorox DF, use equivalent rates. One pt. of Lorox L equals 1.0 lb. of Lorox DF.

Sharda Metolachlor 86.4EC + Lorox Plus + Gramoxone Extra or Roundup

Use only soils with 0.5-3% organic matter. Do not apply to sand or to any soil with pH >6.8.

Coarse soils: Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 12-14 oz./A of Lorox Plus 60DF.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 14-16 oz./A of Lorox Plus.

Fine soils: Apply 1.33-1.67 pts./A of Sharda Metolachlor 86.4EC + 16-18 oz./A of Lorox Plus.

Sharda Metolachlor 86.4EC + Gemini + Gramoxone Extra or Roundup

Use only where soils have 0.5-3% organic matter. Do not apply to sand or loamy sand, or to any soil <0.5% organic matter, or to any soil with pH >7.0, except as specified on the Gemini label.

Coarse soils (sandy loam only): Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 12-16 oz./A of Gemini 60DF.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 16-20 oz./A of Gemini.

Fine soils: Apply 1.33-1.67 pts./A of Sharda Metolachlor 86.4EC + 20-24 oz./A of Gemini.

Sharda Metolachlor 86.4EC + Canopy + Gramoxone Extra or Roundup

Use only where soils have 0.5-5% organic matter. Do not apply to sand, or to any soil with <0.5% organic matter, or to any soil with pH >7.0, except as specified on the Canopy label. Refer to the Canopy label for appropriate rate according to geographical location, soil and organic matter classification, pH limitations, and all other use directions.

Coarse soils (except sand): Apply 1.0 pt./A of Sharda Metolachlor 86.4EC.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC.

Fine soils: Apply 1.33-1.67 pts./A of Sharda Metolachlor 86.4EC.

Sharda Metolachlor 86.4EC + Preview + Gramoxone Extra or Roundup

Use only where soils have 0.5-5% organic matter. Do not apply to sand, or to any soil with <0.5% organic matter, or to any soil with pH >6.8.

Coarse soils (except sand): Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 6* -7 oz./A of Preview 75DF.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 7*-8 oz./A of Preview.

Fine soils: Apply 1.33-1.67 pts./A of Sharda Metolachlor 86.4EC + 8* to 9 - 10 oz./A of Preview.

*Use this rate where the soil organic matter is 0.5-3.0% range.

Sharda Metolachlor 86.4EC + Pursuit + Gramoxone Extra or Roundup

Coarse soils: Apply 1.0 pt./A of Sharda Metolachlor 86.4EC + 0.25 pt./A of Pursuit.

Medium soils: Apply 1.33 pts./A of Sharda Metolachlor 86.4EC + 0.25 pt./A of Pursuit.

Fine soils: Apply 1.67 pts./A of Sharda Metolachlor 86.4EC + 0.25 pt./A of Pursuit.

Post-Emergence Applications

Tank Mixture with Glyphosate Products

Sharda Metolachlor 86.4EC at 1.0-1.33 pts./A may be tank mixed with glyphosate products at labeled rates and applied from emergence up through the 3rd - 5th trifoliate leaf stage of Roundup Ready or glyphosate-tolerant soybeans. Sharda Metolachlor 86.4EC alone will not control emerged weeds. Use this treatment only on soybeans designated for use with glyphosate (e.g., Roundup Ready or glyphosate-tolerant soybeans). The glyphosate product must be registered for post-emergence use in Roundup Ready or glyphosate-tolerant soybeans.

Tank Mixture with Glufosinate Ammonium (Liberty) Products

Sharda Metolachlor 86.4EC at 1.0-1.33 pts./A may be tank mixed with glufosinate products at labeled rates and applied from emergence up through the 3rd - 5th trifoliate leaf stage of soybeans. Sharda Metolachlor 86.4EC alone will not control emerged weeds. Use this treatment only on soybeans designated for use with glufosinate (e.g., Liberty Link). The use of adjuvants such as COC or UAN with Sharda Metolachlor 86.4EC may result in temporary crop injury.

Restrictions:

- Do not apply more than 1.33 pts./A post-emergence.
- Do not graze or feed treated forage or hay from soybeans to livestock following a post-emergence application.

Follow the tank mix product label for adjuvant instructions. Make post-emergence application at least 90 days before harvest.

TOMATOES

Transplanted Tomatoes: Sharda Metolachlor 86.4EC may be applied pre-plant incorporated or pre-plant before transplanting. If the latter method is used, keep soil disturbance to a minimum during transplanting. Application may also be made post-directed to transplants after the first settling rain or irrigation. When an application is made post-directed, apply in a minimum of 20 gallons of water per acre and minimum contact with tomato plants. Sharda Metolachlor 86.4EC will not control emerged weeds. In bedded transplanted tomatoes, apply Sharda Metolachlor 86.4EC pre-plant non-incorporated to the top of the pressed bed, as the last step, prior to laying plastic. Sharda Metolachlor 86.4EC may also be used to treat row-middles in bedded tomatoes, as long as the total amount of Sharda Metolachlor 86.4EC does not exceed the maximum allowed per crop.

Seeded Tomatoes: Sharda Metolachlor 86.4EC may be applied post-directed to direct seeded tomatoes. Tomato plants must be at least 4" tall at the time of application and the product must be applied in a minimum of 20 gallons of water per acre. Minimize spray contact with tomato plants. Sharda Metolachlor 86.4EC will not control emerged weeds.

Tomato Use Rates:

Coarse soils: Apply Sharda Metolachlor 86.4EC at 1.0-1.33 pts./A if organic matter content is <3% or 1.33 pts./A if the organic matter is >3%.

Medium soils: Apply Sharda Metolachlor 86.4EC at 1.33-1.67 pts./A.

Fine soils: Apply Sharda Metolachlor 86.4EC at 1.33-1.67 pts./A if organic matter content is <3% or 1.67-2.0 pts./A if the organic matter content is >3%. Apply by ground application only.

Precautions:

- Sharda Metolachlor 86.4EC may damage transplants that have been weakened by any cause. To prevent damage, plant only healthy transplants.
- In transplanted tomatoes, if Sharda Metolachlor 86.4EC is applied pre-plant incorporated, incorporate to a depth less than the depth of transplanting, and use the lower rate within the specified rate range for the given soil type, or damage may occur.
- For row middle applications where tomatoes are grown on sandy soils and where high soil moisture conditions can exist (i.e. low binding and high evaporation conditions), as may be found in the States of Florida, Georgia, Maryland, and Virginia, there is potential for crop injury in the form of leaf epinasty. The risk of this type of injury can be reduced by:
 - Incorporating the Sharda Metolachlor 86.4EC immediately following application.
 - Applying the Sharda Metolachlor 86.4EC seven or more days before transplanting (but only after the beds have been formed).
 - Minimizing the application of Sharda Metolachlor 86.4EC onto the plastic of the bed
 - Any combination of the above.

Restrictions:

- Do not apply Sharda Metolachlor 86.4EC within 90 days of tomato harvest.
- Do not exceed the maximum label rate for the soil texture per year.
- Do not apply more than 1 post-emergence application per year.

- Do not apply to varieties or cultivars with unknown tolerance to **Sharda Metolachlor 86.4EC**.
- Do not plant when wet, cool, or unfavorable growing conditions exist.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Storage: Keep from freezing: DO NOT store below 32°F.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA region office for guidance.

Container Handling:

NONREFILLABLE CONTAINER (EQUAL TO OR LESS THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available.

NONREFILLABLE CONTAINER (GREATER THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available.

REFILLABLE CONTAINER: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Bottom Discharge IBC (e.g., Schuetz Caged IBC or Snyder Square Stackable). Pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To pressure rinse the container before final disposal, empty the remaining contents from the IBC into application equipment or mix tank. Raise the bottom of the IBC by 1.5 inches on the side which is opposite of the bottom discharge valve to promote more complete product removal. Completely pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve.

Top Discharge IBC, Drums, Kegs (e.g. Snyder 120 Next Gen, Bonar B120, Drums and Kegs).

Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To triple rinse the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Rinse all interior surfaces. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

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NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Sharda USA LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Sharda USA LLC and Seller harmless for any claims relating to such factors.

Sharda USA LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or Sharda USA LLC and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, Sharda USA LLC, MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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Pages 172-175*Confidential Statement of Formula may be entitled to confidential treatment*